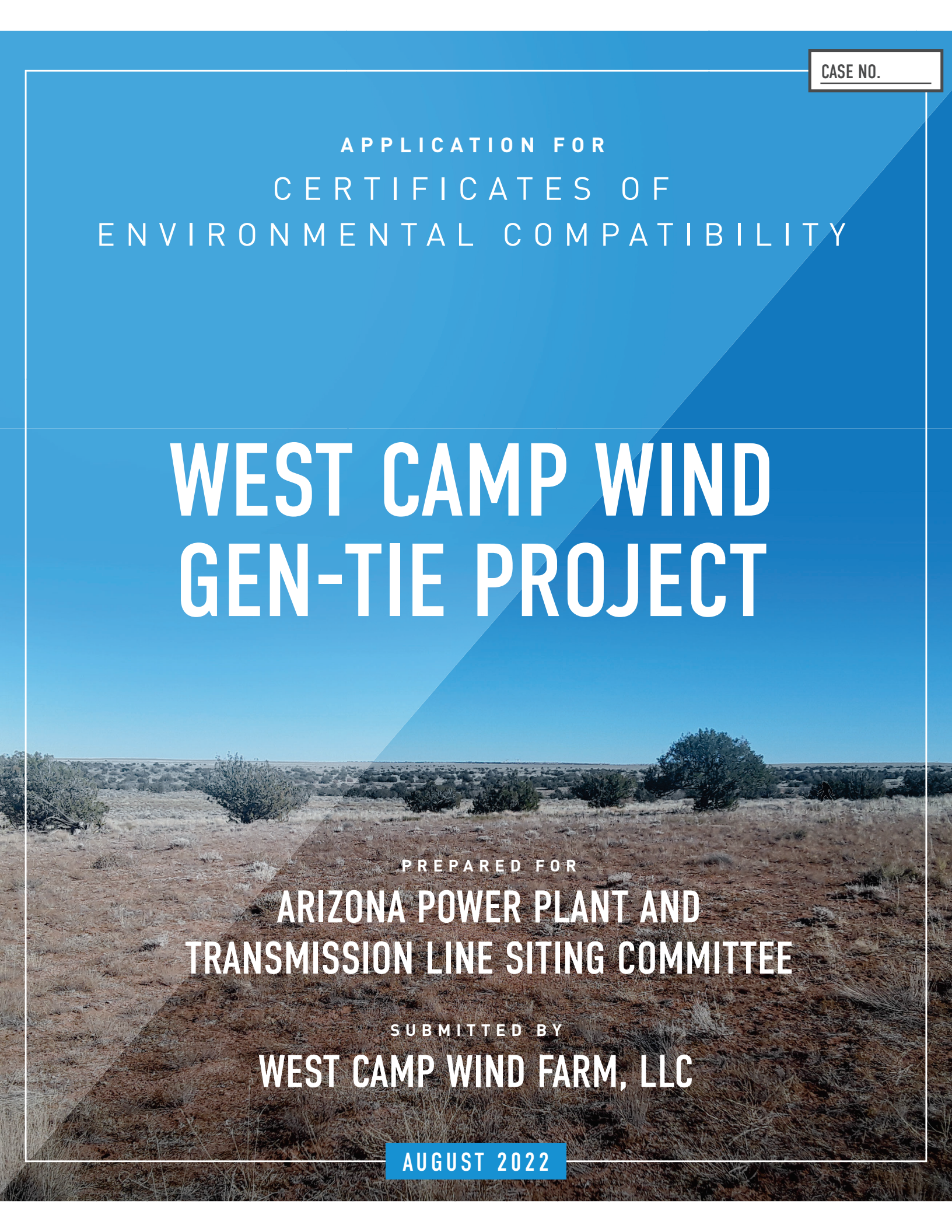
CASE NO.

APPLICATION FOR

CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY

WEST CAMP WIND GEN-TIE PROJECT



PREPARED FOR

ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

SUBMITTED BY

WEST CAMP WIND FARM, LLC

AUGUST 2022

BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

IN THE MATTER OF THE APPLICATION OF WEST CAMP WIND FARM, LLC, IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES, SECTIONS 40-360, ET. SEQ., FOR CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE WEST CAMP WIND GEN-TIE PROJECT, A 345 KV OR 500 KV TRANSMISSION LINE AND ASSOCIATED INTERCONNECTION FACILITIES WITHIN NAVAJO COUNTY, ARIZONA.	DOCKET NO.: Case No. **NOTICE OF FILING APPLICATION FOR CERTIFICATES OF ENVIRONMENTAL COMPATIBILTY**

West Camp Wind Farm, LLC ("Applicant") through undersigned counsel, provides notice of filing of the Application for Certificates of Environmental Compatibility for the West Camp Wind Gen-Tie Project under § 40-360.03.

Communications concerning the Application should be addressed to:

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RESPECTFULLY submitted this 29th day of August, 2022 by:

ACKEN LAW

By: */s/ Albert H Acken*

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Attorneys for West Camp Wind Farm, LLC

Original and 25 copies of the foregoing filed this 29th day of August, 2022, with:

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

COPIES of the foregoing hand-delivered on August 29, 2022 to:

Paul A. Katz, Chairman
Arizona Power Plant and Transmission
Line Siting Committee
Assistant Attorney General
Attention: Tod Brewer
15 South 15th Avenue
Phoenix, AZ 85004

Robin Mitchell
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Phoenix, Arizona 85007

By: *aha*

Application

for

Certificates of Environmental Compatibility

WEST CAMP WIND GEN-TIE PROJECT

Prepared for:

State of Arizona
Power Plant and Transmission Line Siting Committee

Submitted by:

West Camp Wind Farm, LLC

August 29, 2022

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Application

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INTRODUCTION

West Camp Wind Farm, LLC (Applicant), an indirect subsidiary of The AES Corporation (AES), seeks approval of two separate Certificates of Environmental Compatibility (CECs) for a 345- or 500-kV generation-tie transmission line (Gen-Tie Line), up to two collector substations, and one switching station and line tap (collectively, the Gen-Tie Project). The Gen-Tie Project for which the Applicant seeks authorization under the CECs will support the Applicant's proposed West Camp Wind Farm (Wind Farm), a maximum 500-megawatt (MW) wind energy and 250-MW battery storage facility on an approximately 52,500-acre area (Wind Farm Site). The planned Wind Farm Site is located approximately 10 miles southwest of Joseph City in Navajo County, Arizona, as shown in Figure A-1 of Exhibit A. A Gen-Tie Line will interconnect the Wind Farm to the existing Arizona Public Service Company (APS) transmission system at either the Cholla 500-kV Substation or via an on-site switching station and line tap adjacent to the APS 345-kV Cholla-Mazatzal transmission line within the Infrastructure Siting Area (as defined below and depicted in Figure A-1 of Exhibit A).

Two CECs are required to address ownership of specific portions of the Gen-Tie Project. One CEC will cover the Applicant's ownership portion of the transmission line from the generation source to the point of interconnection at either the 345- or 500-kV interconnection Point of Change of Ownership (POCO) (as described below). The second CEC will cover APS's ownership of the transmission line at the POCO at either the 345- or 500-kV interconnection points as described below.

The Gen-Tie Project will be constructed entirely on private land within unincorporated portions of Navajo County. As depicted in the figures provided in Exhibit A, the term "Wind Farm Site" refers to the approximately 52,500-acre area where the Wind Farm will be located. Within the Wind Farm Site is the "Infrastructure Siting Area" in which a portion of the Gen-Tie Line infrastructure will be located. The term "Gen-Tie Line Corridor to Cholla Substation" refers to the Gen-Tie Line transmission corridor extending north outside of the Infrastructure Siting Area to the Cholla Substation. The "Gen-Tie Project" area refers to the Infrastructure Siting Area and the Gen-Tie Corridor to Cholla Substation.

Further, the Gen-Tie Project will employ technology with which the Applicant has existing expertise. AES is a Fortune 500 company that generates and distributes electrical power worldwide. Headquartered in Arlington, Virginia, AES holds assets totaling over $35 billion. Generation capacity of the systems owned and/or operated under AES totals over three (3) gigawatts (GW) across the United States, with an additional one (1) + GW under construction. In addition, AES Clean Energy, an indirect wholly owned subsidiary of AES, has a contracted renewable energy development pipeline that includes over three (3) GW of projects. AES has developed, constructed, and is currently operating over 2,800 miles of transmission lines and numerous high-voltage substations and related electrical infrastructure in the United States.

Gen-Tie Project Overview

The Gen-Tie Project consists of a 345- or 500-kV Gen-Tie Line, up to two collector substations, and one switching station and line tap.

Pursuant to Arizona Revised Statutes (ARS) 40-360 et seq., the Applicant seeks CECs for:

- Up to approximately 11 miles of 345-kV Gen-Tie Line, to be constructed on private land within the Infrastructure Siting Area.
- Up to approximately 25 miles of 500-kV Gen-Tie Line, to be constructed on private land within the Infrastructure Siting Area and the Gen-Tie Line Corridor to Cholla Substation.

- Up to two (2) collector substations within the Infrastructure Siting Area, each of which will step-up power from the 34.5-kV collection lines to the 345- or 500-kV transmission voltage.
- One (1) new 345-kV interconnection switching station and two circuits of transmission line tap, which may be on double-circuit structures, located within the Infrastructure Siting Area that will provide interconnection with the APS Cholla-Mazatzal 345-kV transmission line.

The Applicant is proposing two collector substations to allow phased construction of the Wind Farm. Assuming a phased construction, one phase would include one substation, potentially the switching station, and the Gen-Tie Line. Under a separate phase, an additional substation may be built. Under the scenario where an additional substation is built, a new Gen-Tie Line segment would be built to connect the two substations located in the Infrastructure Siting Area.

The Applicant currently has active 345-kV and 500-kV interconnection queue requests with APS, via Q351 for Gen-Tie Line Option A and Q311 for Gen-Tie Line Option B. To provide for the option to interconnect at either 345 or 500 kV, this Application requests approval for both interconnection options: at the existing Cholla Substation for the 500-kV interconnection option and the on-site line tap for the 345-kV interconnection option. Both interconnection options are being pursued such that the Wind Farm can meet different customer energy requirements and deliverability needs. Technical, engineering, and ongoing interconnection study factors will drive the selected interconnection voltage of the Wind Farm.

Two CECs are required to address ownership of specific portions of the Gen-Tie Project, as portions of the Gen-Tie Project will be owned by APS. To allow for future assignment to APS for the portion of the Gen-Tie Project that will be owned by APS, this Application requests two CECs. CEC-1 for the Gen-Tie Project will originate at a substation within the Infrastructure Siting Area and terminate at one of the two POCOs and will be held by the Applicant. The second CEC will cover two alternative interconnection points for a 345- and 500-kV interconnection; CEC-2 will eventually be held by APS. Gen-Tie Line Option A will interconnect at the Cholla 500-kV Substation, and APS will own the portion of transmission line at the POCO where the Gen-Tie Line crosses into the controlled access areas of the Cholla Substation (CEC-2). Gen-Tie Line Option B will interconnect at the proposed 345-kV switching station and line tap, and CEC-2 will include the 345-kV switching stations, up to 0.5 mile of 345-kV transmission line from the Cholla-Mazatzal 345-kV line to the switching station for the line taps, and a few hundred feet of 345-kV line from the switching station to the last structure outside the switching station fence line.

Project Location

As shown in Figure A-1 of Exhibit A, the Gen-Tie Project will be constructed entirely on private land within the following sections, townships, and ranges:

- **Gen-Tie Line Corridor to Cholla Substation**
  - Sections 12, 13, 14, 22, 23, 26, 27, 34, and 35, Township 17 North, Range 18 East
  - Sections 5–7, Township 17 North, Range 19 East
  - Sections 22, 23, 26, 27, and 32–34, Township 18 North, Range 19 East
- **Gen-Tie Line within the Infrastructure Siting Area**
  - Sections 3–6 and 8–10, Township 15 North, Range 18 East
  - Sections 3–11, 14, 15, 17–23, 26–31, and 33–35, Township 16 North, Range 18 East
- **Substation(s) within the Infrastructure Siting Area**
  - Section 9, Township 15 North, Range 18 East

- Sections 26 and 34, Township 16 North, Range 18 East

- **Switching station and line tap within the Infrastructure Siting Area**
  - Section 7, Township 16 North, Range 18 East

Within the Wind Farm Site, the Applicant excluded all State Trust lands and portions of the private lands from the Gen-Tie Line Project. These areas are depicted on the figures in Exhibit A as "No Gen-Tie Development" areas.

The Applicant has executed lease agreements and transmission easements with the private landowners within the Infrastructure Siting Area and the Gen-Tie Line Corridor to Cholla Substation APS controlled access line. The Applicant will continue coordinating with APS regarding the interconnection into the Cholla Substation and will obtain all necessary real estate entitlements prior to construction. Further, the Applicant will also coordinate crossing agreements with other easement holders and infrastructure owners as needed.

Description of Project Infrastructure

The Applicant is evaluating several conceptual Gen-Tie Line interconnection options as shown in Figure A-2 of Exhibit A and described below:

- Gen-Tie Line Option A – Up to (2) two substations located within the Infrastructure Siting Area and up to an approximately 25-mile-long 500-kV transmission line to the existing Cholla Substation. Exterior to the Infrastructure Siting Area, the Gen-Tie Line Corridor to Cholla Substation largely parallels existing high-voltage transmission line infrastructure to the existing Cholla Substation.
- Gen-Tie Line Option B – Up to two (2) substations, up to an approximately 11-mile-long 345-kV Gen-Tie to the existing APS 345-kV Cholla-Mazatzal transmission line, and a single on-site switching station and double transmission line tap, possibly on double-circuit structures, all within the Infrastructure Siting Area.

Within the Infrastructure Siting Area, the Gen-Tie Line will be constructed entirely on private land in the specified sections. The location of the Gen-Tie Line within the Infrastructure Siting Area will be based on further electrical engineering requirements and siting surveys. The Gen-Tie Line within the Gen-Tie Line Corridor to Cholla Substation will be constructed within a 150-foot-wide corridor.

Under both Gen-Tie Line Option A and Option B, up to two collection substations will be constructed within the Infrastructure Siting Area. If the Gen-Tie Project is constructed in phases, a single substation will be constructed per phase. The collector substations will each step-up power from 34.5 kV to the transmission voltage of 345 kV or 500 kV. Each collector substation is expected to cover approximately 8 acres and will consist of a power transformer, a control house, and a substation superstructure within an approximately 8-foot-tall fence enclosure.

Under Option B, a switching station and line tap will be constructed within the Infrastructure Siting Area for the interconnection with the APS 345-kV Cholla-Mazatzal transmission line. The switching station is expected to cover approximately 8 acres.

Under either Gen-Tie Line option, the Gen-Tie Line will consist of either steel monopole structures or steel H-Frame structures capable of supporting up to six conductor cables (depending on single-circuit vs. double-circuit applications), plus two lightning protection and communication cables, suspended between structures. The structures are expected to range from approximately 90 feet to no more than 195 feet tall and will be spaced approximately 1,000 feet apart. Variations may be made to achieve site-specific

engineering requirements. An estimated six poles will be required per mile of line, but additional or fewer poles may be required based on final engineering requirements. Pole structures will be sited to avoid recorded cultural resource sites and other sensitive environmental resources, if identified. Line marking devices will be installed where birds may be at increased risk of collision per Avian Power Line Interaction Committee (APLIC) 2012 guidance.

Purpose and Need

The Gen-Tie Project is needed to connect the planned Wind Farm to the regional transmission grid for delivery of electricity. The Wind Farm, of which the Gen-Tie Project is an essential part, will provide numerous economic and environmental benefits to Navajo County and the State of Arizona. It will provide a clean and renewable source of energy that uses no water for electrical generation and emits no air pollution. It will diversify the energy resources available to the State of Arizona and provide other state and local socioeconomic benefits further described below. The flexibility requested regarding infrastructure within the Infrastructure Siting Area and the two voltage interconnection options is needed to ensure the Wind Farm can be constructed to meet different customer energy requirements and deliverability needs.

State and Local Benefits

The Wind Farm, through the Gen-Tie Project, will benefit the state and local communities by providing:

- Electricity equivalent to powering over 300,000 homes annually, with no operational air emissions or water use.
- Approximately 500 temporary construction jobs and around 20 to 30 full-time jobs during the Wind Farm's planned 30-year useful life.
- Lease payments to rural ranching families.
- Property taxes for Navajo County and sales taxes for the State of Arizona.
- Over $1.5 million in annual local worker salary payments during operation.
- At least $9.7 million of indirect local spending during construction, which include local businesses such as lodging, mechanics, fuel, meals, hardware, etc.
- Over $700,000 of indirect local spending annually during operations, which include local businesses such as lodging, mechanics, fuel, meals, hardware, etc.

The Wind Farm, through the Gen-Tie Project, will provide electricity customers with a clean and reliable form of energy. This clean form of energy does not use any of the valuable water resources in the region and does not produce any air emissions.

Public Involvement Overview

A community outreach program is underway to ensure that local jurisdictions and community residents are provided the opportunity to ask questions, request information, and express concerns or support of the Wind Farm and Gen-Tie Project. Public involvement was sought in support of the Wind Farm's application for a Special Use Permit from Navajo County. A notice for a public open house was mailed on May 4, 2022, inviting neighbors within 1 mile of the Wind Farm, agencies, and other stakeholders to two public open house meetings held on May 24, 2022, in Holbrook, Arizona. Other outreach efforts included a legal advertisement placed in the local newspaper and a project website that includes an online comment form. A second outreach letter specific to the CEC application process for the proposed Gen-Tie

Project was sent on June 6, 2022, to landowners within 1 mile of the Wind Farm Site and Gen-Tie Line to Cholla Substation, agencies, and stakeholders. A stakeholder briefing was also held in Joseph City on August 4, 2022. Further information about the public involvement process is included as Exhibit J.

Environmental Setting

As shown in Figure A-1 of Exhibit A, the Gen-Tie Project will be constructed entirely on private land. Land crossed by the proposed Gen-Tie Project is unoccupied private rangeland and contains existing utility corridors (see Exhibit A, Figure A-4). Topography in the area is characterized by flat to rolling terrain dominated by semiarid grasslands and shrublands, with open juniper savanna and pinyon-juniper woodlands in the southern reaches. Ephemeral washes, some deeply incised, drain surface runoff generally northward to the Little Colorado River. Just before entering the Cholla Substation, the Gen-Tie Line Corridor to Cholla Substation crosses the Little Colorado River, which flows intermittently in this section of the waterway. Other surface waters in the vicinity of the Gen-Tie Line Corridor to Cholla Substation include stock tanks and impoundments associated with the Cholla Power Plant. Additional information about the physical and biological properties of the proposed route is provided in Exhibits C and D.

The predominant land uses in and around the Gen-Tie Project area are cattle ranching, dispersed recreation, and electrical transmission facilities. The proposed Gen-Tie Line Corridor to Cholla Substation closely parallels three existing transmission lines:

- The APS 345-kV Preacher Canyon-Cholla line;
- APS 345-kV Cholla-Mazatzal line, which occupies the same corridor as the Preacher Canyon-Cholla line; and
- APS 500-kV Saguaro-Cholla line, which occupies a separate corridor, approximately 1,800 feet east of the 345-kV corridor.

At the north end of the proposed Gen-Tie Line Corridor to Cholla Substation, additional land uses include tracks of the BNSF Railway Company; the APS Cholla Substation; and the Cholla Power Plant, a coal-fired power plant currently rated at 387 MW scheduled for closure in 2025.

Joseph City, an unincorporated community of approximately 1,900 people, lies approximately 2 miles northwest of the Cholla Substation. There are no schools or churches within 1 mile of the Gen-Tie Project. The Joseph City Community Cemetery is located approximately 0.75 mile northwest of the Cholla Substation. Aside from Joseph City, very few people live within 3 miles of the Gen-Tie Project. The closest legal residence and residential-type structures within 1 mile of the Gen-Tie Project (Infrastructure Siting Area and Gen-Tie Line Corridor to Cholla Substation) are shown in Figure A-4 of Exhibit A. Residences and residential-type structures were determined based on a review of aerial imagery; review of Navajo County permit databases for occupancy, structures, and septic permits; and discussions with Navajo County planning staff. The closest legally permitted residence was determined in coordination with Navajo County planning staff and is approximately 0.45 mile west of the Infrastructure Siting Area (Exhibit A, Figure A-4). Several other residential-type structures shown on Exhibit A, Figure A-4 are within 1 mile of the Infrastructure Siting Area. Additional residential-type structures are also located in the Chevelon Canyon Ranch Subdivision more than 1 mile west of the Infrastructure Siting Area.

Access to the northern part of the Gen-Tie Project may occur via Obed Road extending south out of Joseph City or McLaws Road extending west out of Holbrook. Access to the southern part of the Gen-Tie Project is by Hutch Road, which, in turn, is accessed by State Highways 77 and 377. Alternative access to the southern part of the Gen-Tie Project is possible via Apache Avenue, McLaws Road, Territorial Road,

and West Camp Road. From these County-maintained roads, existing ranch roads on private and ASLD parcels can be utilized to access the Infrastructure Siting Area. Both Obed Road and the state highways link the area to Interstate Highway 40. Several other dirt ranch roads intersect the Infrastructure Siting Area and Gen-Tie Line Corridor to Cholla Substation.

Summary of Environmental Compatibility

The Applicant is committed to thoroughly studying, avoiding, and minimizing environmental impacts of the Gen-Tie Project and seeks approval of the CEC for the Gen-Tie Project according to the factors outlined in ARS 40-360.06. The Gen-Tie Project will provide transmission services for the Wind Farm, a new renewable energy project that will use no water and produce no greenhouse gas or other air emissions to generate electricity. There will be negligible use of water in the operations and maintenance building. The Wind Farm is undergoing thorough environmental review by Navajo County, the Arizona Game and Fish Department, the U.S. Fish and Wildlife Service, and other agencies.

As further described and supported by the exhibits accompanying this application, the Gen-Tie Project itself:

- Will permanently disturb a relatively small amount of land (up to approximately 24 acres), most of which has already been disturbed by livestock grazing and related ranching activities, as well as existing electrical infrastructure;
- Will allow the continued use of private lands for their existing uses (predominantly livestock grazing, hunting, transmission lines);
- Will not disturb any areas of unique biological wealth and will have minimal impact to special-status species with the potential to occur in the Gen-Tie Project area;
- Will have minimal visual effects because the few people live near or pass through the area, and three high-voltage transmission lines already exist within the vicinity of residences;
- Will avoid known archaeological or historical sites of significance;
- Is approximately 0.45 mile from the nearest legally permitted residence and is not anticipated to result in significant impacts associated with noise or signal interference; and
- Is an appropriate use of the selected site, given its total environment, including the wind resource specific to this location.

The Applicant therefore respectively requests that the Power Plant and Transmission Line Siting Committee grant and the Arizona Corporation Commission approve CECs for the construction of the Gen-Tie Project described herein.

References

Arizona Public Service (APS). 2022. 2021 Renewable Energy Standard Compliance Report. Available at E000018569.pdf (azcc.gov). Accessed May 20, 2022.

U.S. Department of Energy. 2008. Economic Benefits, Carbon Dioxide (CO2) Emissions Reductions, and Water Conservation Benefits from 1,000 Megawatts (MW) of New Wind Power in Arizona. Available at https://www.nrel.gov/docs/fy09osti/44144.pdf. Accessed May 20, 2022.

APPLICATION

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APPLICATION FOR
CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY

(Pursuant to A.R.S. § 40-360.03 and 40-360.06 and A.A.C. Rules R14-3-219)

1. Name and address of the Applicant

West Camp Wind Farm, LLC
282 Century Place #2000
Louisville, Colorado 80027

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

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, Colorado 80027
(463) 426-9980
robert.gardner@aes.com

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

West Camp Wind Farm, LLC, filed its Ten-Year Plan on August 2, 2022.

4. Description of the proposed facility, including:

a. With respect to an electric generating plant:

[Not applicable]

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 proposed Gen-Tie Line will be 345-kV or 500-kV alternating current. The voltage of the Gen-Tie Line will be determined based on the Gen-Tie Line option selected in coordination with APS during ongoing interconnection studies. The Applicant currently has active 345-kV and 500-kV interconnection requests.

(2) Description of the proposed structures:

The Gen-Tie Line will consist of either steel monopole structures or steel H-Frame structures capable of supporting up to six conductor cables (depending on single-circuit vs. double-circuit applications), plus two lightning protection and communication cables, suspended between structures. The tallest structures are expected to be approximately 195 feet tall and will be spaced approximately 1,000 feet apart. Variations may be made to achieve site-specific engineering requirements. An estimated six poles will be required per mile of line, but additional or fewer poles may be required based on final engineering design. Pole structures will be sited to avoid recorded cultural resource sites and other environmentally sensitive areas, if identified. Line marking devices will be installed where birds may be at increased risk of collision per Avian Power Line Interaction Committee (APLIC) 2012 guidance.

Conceptual drawings showing typical structures are provided in Exhibit G.

(3) Description of proposed switchyards and substations:

Under either Gen-Tie Line option, up to two collection substations will be constructed within the Infrastructure Siting Area. If the Project is constructed in phases, a single substation will be constructed per phase. The collector substations will step-up power from 34.5 kV to the transmission voltage of 345 kV or 500 kV. Each collector substation is expected to cover approximately 8 acres and will consist of a power transformer, a control house, and a substation superstructure within an approximately 8-foot-tall fence enclosure.

Under Option B, an additional 345-kV interconnection switching station and line tap will be constructed within the Infrastructure Siting Area for the interconnection with the APS 345-kV Cholla-Mazatzal transmission line. The switching station is expected to cover approximately 8 acres and will consist of aboveground electrical infrastructure within an approximately 8-foot-tall fence enclosure.

A conceptual drawing of the collector substations and switching station and line tap are provided in Exhibit G.

(4) Purpose for constructing said transmission line:

The purpose of the transmission line is to deliver electrical power generated by the West Camp Wind Farm, a planned maximum capacity 500-MW wind energy generating facility and 250-MW battery storage facility, to the regional 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:

Within the Infrastructure Siting Area, the Gen-Tie Line will originate at the new substation locations in Section 9 of Township 15 North, Range 18 East and Sections 34 and 26 of Township 16 North, Range 18 East.

Under Gen-Tie Line Option A, from the substation locations, the Gen-Tie Line will run approximately 8 to 9.5 miles to the north to the Gen-Tie Line Corridor to Cholla Substation in Section 3 of Township 16 North, Range 18 East.

Under Gen-Tie Line Option B, the Gen-Tie Line will run from the substations approximately 5 to 11 miles to the west and northwest to the switching station and line tap located in Section 7 of Township 16 North, Range 18 East.

Exterior to the Infrastructure Siting Area and within the Gen-Tie Line Corridor to Cholla Substation, the Gen-Tie Line will run north from Section 3 of Township 16 North, Range 18 East for approximately 2 miles, then turn northeast at Section 23 of Township 17 North, Range 18 East to parallel the existing APS 345-kV Preacher Canyon-Cholla transmission line and APS 345-kV Cholla-Mazatzal transmission line for approximately 9.5 miles to the APS Cholla Substation.

Please see Exhibit A, Figure A-2 for an illustration of the conceptual Gen-Tie Line options.

(2) Straight-line distance between such points:

The straight-line distance between the substation and point of interconnection for each conceptual Gen-Tie Line option is as follows:

- Gen-Tie Line Option A: Approximately 18 miles from the southernmost substation in Section 9, Township 15 North, Range 18 East to the Cholla Substation.
- Gen-Tie Line Option B: Approximately 5.60 miles from the easternmost substation in Section 32, Township 16 North, Range 18 East to the switching station and line tap in Section 7, Township 16 North, Range 18 East.

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

The length of the conceptual Gen-Tie Line options are as follows:

- Gen-Tie Line Option A: Up to approximately 25 miles
- Gen-Tie Line Option B: Up to approximately 11 miles

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:

Within the Infrastructure Siting Area, the Gen-Tie Line will be constructed within the private property boundary of the Wind Farm Area. The location of the Gen-Tie Line corridor within the Wind Farm will be based on further electrical and engineering requirements. The Gen-Tie Line within the Gen-Tie Line Corridor to Cholla Substation will be constructed within a 150-foot-wide corridor.

(2) Nominal length of spans:

The typical span length between structures will be approximately 1,000 feet, with variations made to achieve site-specific mitigation objectives or meet site-specific engineering requirements.

(3) Maximum height of supporting structures:

The maximum height of the supporting structures will be up to 195 feet aboveground.

(4) Minimum height of conductor above ground:

The minimum height of the conductor above existing grade will be 30 feet.

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 proposed transmission line ranges from $7 million to $37 million depending on which route is constructed. This includes the costs for construction of the Gen-Tie Line, including the conductor and the supporting structures (but not including the proposed substations or switching station). These cost estimates are for illustrative purposes only and are subject to future market pricing and final engineering details.

The estimated costs associated with access to the land required for these routes cannot be meaningfully calculated at this time. These costs will be calculated after further engineering.

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.)

As described above, the Applicant currently has active 345-kV and 500-kV interconnection requests and is evaluating Gen-Tie Line interconnection options as shown in Figure A-2 of Exhibit A. Within the Infrastructure Siting Area, the Gen-Tie Line will be constructed entirely on private land in the specified sections. For both Gen-Tie Line Option A and Option B, the location of the Gen-Tie Line within the Infrastructure Siting Area will be based on further electrical engineering requirements and siting surveys. The Gen-Tie Line within the Gen-Tie Line Corridor to Cholla Substation will be constructed within a 150-foot-wide corridor.

The geographical points between which the Gen-Tie Line will run and the locations of the substations and switching station are described above. The new substations will be located within Sections 34 and 26 of Township 16 North, Range 18 East, and Section 9 of Township 15 North, Range 18 East. The switching station and line tap will be located within Section 7 of Township 16 North, Range 18 East.

Under Gen-Tie Option A, the Gen-Tie line will be a single circuit from Substation 2 to Substation 1 (if two substations are built) and a single circuit from Substation 1 to the Cholla Substation. This single circuit line will connect from the last structure outside the Cholla Substation to the APS infrastructure within the substation. From the substation locations within the Infrastructure Siting Area, the Gen-Tie Line will run approximately 8 to 9.5 miles to the north to the Gen-Tie Line Corridor to Cholla Substation in Section 3 of Township 16 North, Range 18 East. From the Infrastructure Siting Area and within the Gen-Tie Line Corridor to Cholla Substation, the Gen-Tie Line will run north from Section 3 of Township 16 North, Range 18 East for approximately 2 miles, then turn northeast at Section 23 of Township 17 North, Range 18 East to parallel the existing APS 345-kV Preacher Canyon-Cholla

transmission line and APS 345-kV Cholla-Mazatzal transmission line for approximately 9.5 miles to the APS Cholla Substation.

Under Gen-Tie Option B, the Gen-Tie line will be a single circuit from Substation 2 to Substation 1 (if two substations are built) and a single circuit from Substation 1 to the switching station. There will be two lines connecting the switching station to the existing APS Cholla-Mazatzal 345-kV line, which will consist of either two single-circuited line structures or a single double-circuited line structure, as determined by APS. Under Gen-Tie Option B, the switching station will be located adjacent to the existing APS transmission lines, and the APS line will be cut to enter/exit the new switching station.

This Application requests approval for both Gen-Tie Line Option A and Option B.

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 Gen-Tie Project will be constructed entirely on private land within unincorporated portions of Navajo County.

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 Gen-Tie Project is located within the jurisdiction of Navajo County, and the proposed Gen-Tie Project will be compliant with the county zoning ordinances and master plans. Land crossed by the Gen-Tie Project is zoned A-General, Rural 20 (RU-20), and Rural 1 (RU-1) (see Exhibit A, Figure A-5). Under Section 302(6), 402(6), and 802 of Article 4 in the *Navajo County Zoning Ordinance*, the Gen-Tie Line, substation, and switching station and line tap are permitted facilities in the A-General, RU-20, RU-1 zones. Under Sections 302(6), 402(6), 802 of Article 4 in the *Navajo County Zoning Ordinance*, electric power generating plants and facilities, including wind projects, are permitted special uses within the A-General, RU-20, and RU-1 zoning districts. Consistent with that provision, the Applicant applied for a *Special Use Permit for Wind Energy Generation Facilities* (SUP) for the West Camp Wind Farm in June 2022, with Navajo County review and permit hearings planned to continue in 2022.

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 potential Gen-Tie Project impacts to biological resources, visual resources, cultural resources, recreational resources, land use, noise levels, and communications signals. These evaluations are described in Exhibits B, C, D, E, F, H, and I.

Furthermore, as described in Exhibit B, the Wind Farm as a whole, including the Gen-Tie Project, has been the subject of numerous other environmental studies and is undergoing review by Navajo County in conjunction with the SUP process.

WEST CAMP WIND FARM, LLC

Arlo Corwin
Director of Development

EXHIBIT A

Project Maps

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EXHIBIT A. PROJECT MAPS AND LAND USE GUIDANCE

In accordance with Arizona Administrative Code Rules of Practice and Procedure R14-3-219, the applicant provides the following location maps and land use information:

*Exhibit A-3: Where commercially available,** a topographic map,1:250,000 scale, showing any proposed transmission line route of more than 50 miles in length and the adjacent area. For routes of less than 50 miles in length, use a scale of 1:62,500. If application is made for alternative transmission line routes, all routes may be shown on the same map, if practicable, designated by applicant's order of preference.*

*Exhibit A-4: 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 on 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.*

Project Maps

The following figures are provided in this exhibit:

1. **Figure A-1. Gen-Tie Project location.**

   Figure A-1 provides an overview of the West Camp Wind Gen-Tie Project (Gen-Tie Project) location.

2. **Figure A-2. Gen-Tie Line conceptual options.**

   Figure A-2 provides an overview of the conceptual generation-tie transmission line (Gen-Tie Line) Options A and B. These conceptual options are further described in the CEC Application narrative.

3. **Figures A-3.1 through A-3.6. Gen-Tie Project overview.**

   Figures A-3.1 through A-3.6 show the proposed Gen-Tie Project on a topographic map at a 1:62,500 scale (the proposed route is less than 50 miles).

4. **Figure A-4. Gen-Tie Project land use.**

   Figure A-4 shows existing infrastructure and land uses in the Gen-Tie Project area and vicinity. Land uses shown on this figure include the existing Cholla Substation and Cholla Power Plant, transmission lines, natural gas pipelines, a Bureau of Land Management Area of Critical Environmental Concern, Chevelon Canyon Ranch Subdivision, nearest legal residences, and residential-type structures within 1 mile of the Gen-Tie Project. As described in the CEC

Application Environmental Setting section, residences and residential-type structures were determined based on a review of aerial imagery; review of Navajo County permit databases for occupancy, structures, and septic permits; and discussions with Navajo County planning staff. Residential-type structures identified on Figure A-4 include permitted legal residences and unpermitted structures.

5. **Figure A-5. Gen-Tie Project zoning.**

6. **Figure A-6. Gen-Tie Project Comprehensive Plan character areas.**

7. **Figure A-7. Gen-Tie Project Aztec Area Plan character areas.**

   Figures A-5, A-6, and A-7 show the Navajo County zoning and designated character areas within the Gen-Tie Project and vicinity. The following section provides additional details on land use guidance.

Existing Land Use Guidance (Zoning)

The proposed Gen-Tie Project will be located entirely on private land, all of which is within the jurisdiction of Navajo County. The Gen-Tie Project parcels are zoned as A-General, Rural-20 (RU-20), and Rural-1 (RU-1) (Navajo County 2022). These zoning districts are described below.

A-General: A land use designation for unincorporated areas of the county not specifically designated for any other zone classification. Uses permitted in the A-General Zone include farm and non-farm residential uses; farms; and recreational, institutional, commercial, and industrial uses as specifically listed in the ordinance. Under Section 302(6), Article 4 in the *Navajo County Zoning Ordinance*, the Gen-Tie Line, substation, and switchyard and line tap are permitted facilities in the A-General zoning district. Under Section 302(6), electric power generating plants and facilities, including wind projects, are permitted special uses within the A-General, zoning district. Consistent with that provision, the Applicant applied for a *Special Use Permit for Wind Energy Generation Facilities* (SUP) for the West Camp Wind Farm in June 2022. A decision on the SUP application is anticipated in September 2022.

Rural-20 (RU-20): Per Section 402(6) in Article 4 in the *Navajo County Zoning Ordinance*, permitted utility facility uses are the same as in the A-General zoning district.

Rural-1 (RU-1): Per Section 802 in Article 4 in the *Navajo County Zoning Ordinance*, permitted uses are the same as in the Rural-20 zoning district.

Future Land Use Guidance (Land Use Plans)

Two Navajo County-adopted planning documents apply to the Gen-Tie Project, the *Navajo County Approved Comprehensive Plan* (Comprehensive Plan) (Navajo County 2011) and the *Aztec Area Plan, Navajo County, AZ* (Aztec Area Plan) (LVA Urban Design Studio 2011). The Aztec Area Plan, which is incorporated into the Comprehensive Plan by reference, was developed to guide the future development of 228,040 acres of private property owned by the Aztec Land and Cattle Company and related companies. The Aztec Area Plan is the controlling planning document for all private land within the Gen-Tie Project area except for a parcel owned by BNSF Railway south of the Cholla Substation and the Arizona Public Service (APS) parcels at the Cholla Substation. The Comprehensive Plan is the controlling planning document for those parcels.

The Comprehensive Plan does not define specific land uses, but rather delineates "character areas" that identify how each specific area may develop over time using general guidelines. The BNSF and APS parcels at the Cholla Substation are mapped in the Comprehensive Plan as a "Community Village" character area, the most urban classification for unincorporated land in the county. In this area, the Gen-Tie Line Corridor to Cholla Substation is co-located with existing APS transmission infrastructure.

The Aztec Area Plan adopts selected character areas from the Comprehensive Plan—but defines them slightly differently—and adds several new ones. As in the Comprehensive Plan, character areas in the Aztec Area Plan are intended to "provide a general framework for development . . . rather than establish a more precise guide that mirrors a zoning district map" (LVA Urban Design Studio 2011:19). In the Aztec Area Plan, the character area designations in the Gen-Tie Project area are "Rural Ranch," "Rural Edge," "Powerline Corridor Overlay," and "Community Village." The "Rural Ranch" and "Rural Edge" character areas have a similar purpose for the preservation of open character of land for rural uses as the Comprehensive Plan, while also allowing for rural residential development and encouraging utilities and generation facilities. The 1-mile-wide "Powerline Corridor Overlay" character area is intended to promote and encourage future major transmission lines within existing power line corridors. The Gen-Tie Line Corridor to Cholla Substation and the on-site switchyard and line tap are co-located with the "Powerline Corridor Overlay" character area.

One Aztec Area Plan "Community Village" character area overlaps a portion of the proposed Gen-Tie Project. The "Community Village" designation predicts residential and commercial development. At the time of the Aztec Area Plan development in 2011, new community village areas were contemplated along future local transportation arteries proposed through Aztec rangelands. At the time, wind energy development was contemplated in regions mostly to the south and east of the Project area, regions that were mapped as having higher wind resource potential (see Appendix 2 of the Aztec Area Plan). Since 2011, however, technologies have advanced such that areas previously thought of as having moderate wind resource potential (such as the proposed Project area) are now viable for development. One of the intents of the Aztec Area Plan is to encourage economic growth in the county (LVA Urban Design Studio 2011:17). Pursuing the economic growth potential afforded by evolving wind energy technology and generation interconnections with the existing regional transmission grid is consistent with that intent of the Aztec Area Plan. The sponsors of the Aztec Area Plan confirmed in a letter to the Applicant that the overall wind farm and associated infrastructure is consistent with the plan (Attachment A-1).

References

LVA Urban Design Studio. 2011. Aztec Area Plan, Navajo County, AZ. Prepared for Aztec Land and Cattle Company, Limited, Aztec Land Company, LLC [and] Aztec Despain Ranch, LLC. Tempe, Arizona. Available at: https://navajocountyaz.gov/Departments/Planning-and-Zoning/Comprehensive-Plan. Accessed June 2022.

Navajo County. 2011. Navajo County Approved Comprehensive Plan. Available at: https://navajocountyaz.gov/Departments/Planning-and-Zoning/Comprehensive-Plan. Accessed June 2022.

———. 2022. Navajo County Zoning Ordinance. Available at: https://navajocountyaz.gov/Departments/Planning-and-Zoning/Zoning-Ordinance-and-Forms. Accessed June 2022.

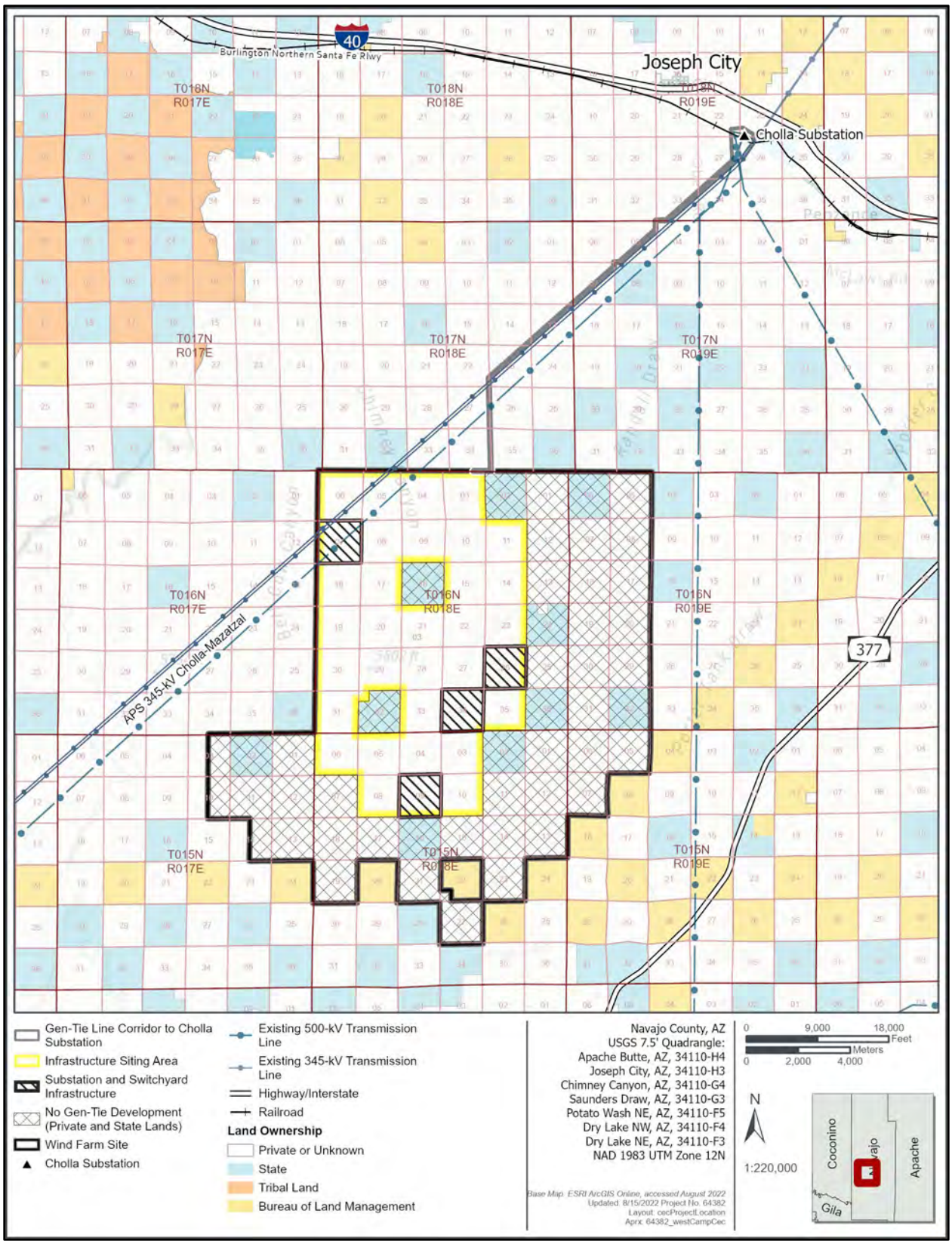

Figure A-1. Gen-Tie Project location.

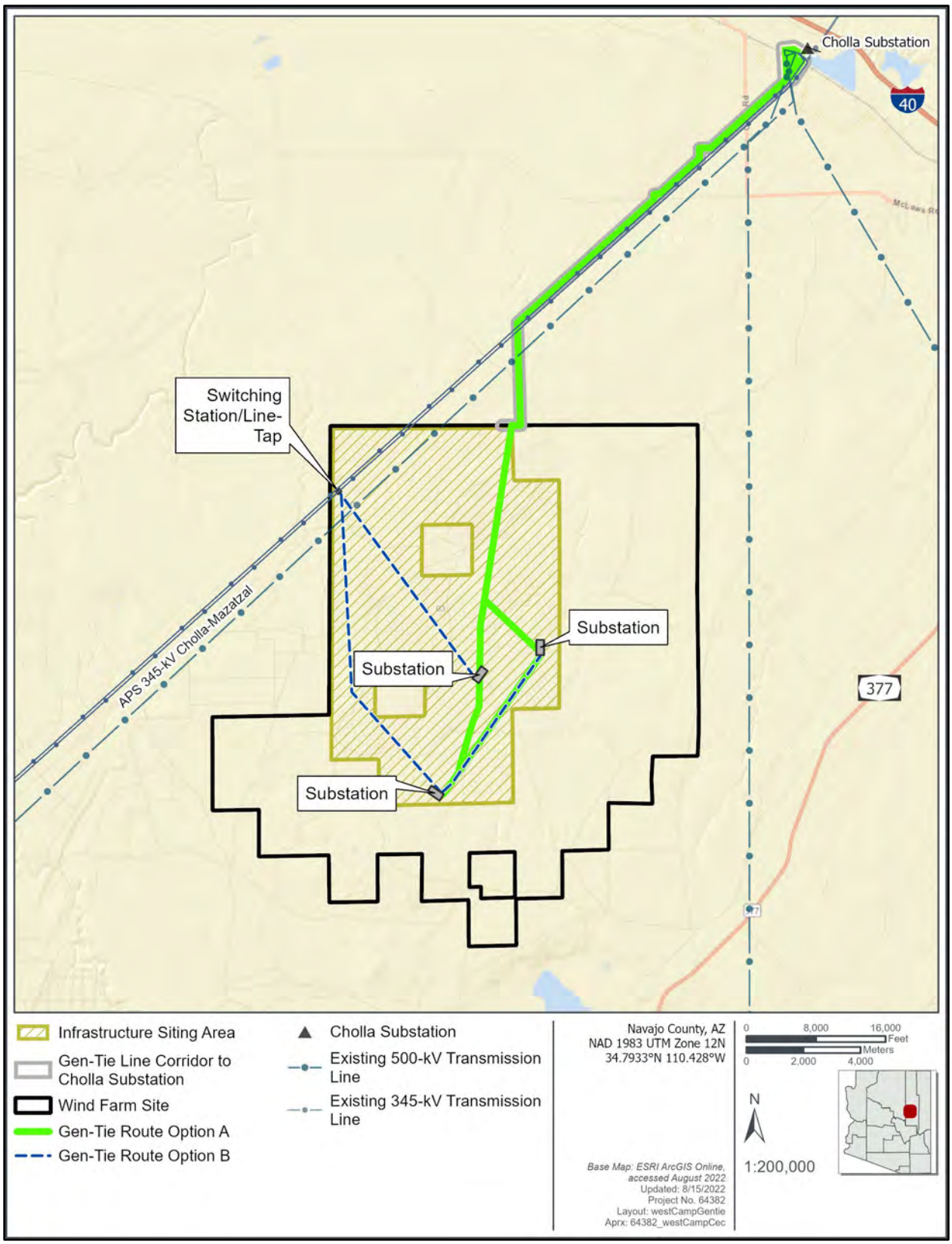

Figure A-2. Gen-Tie Line conceptual options.

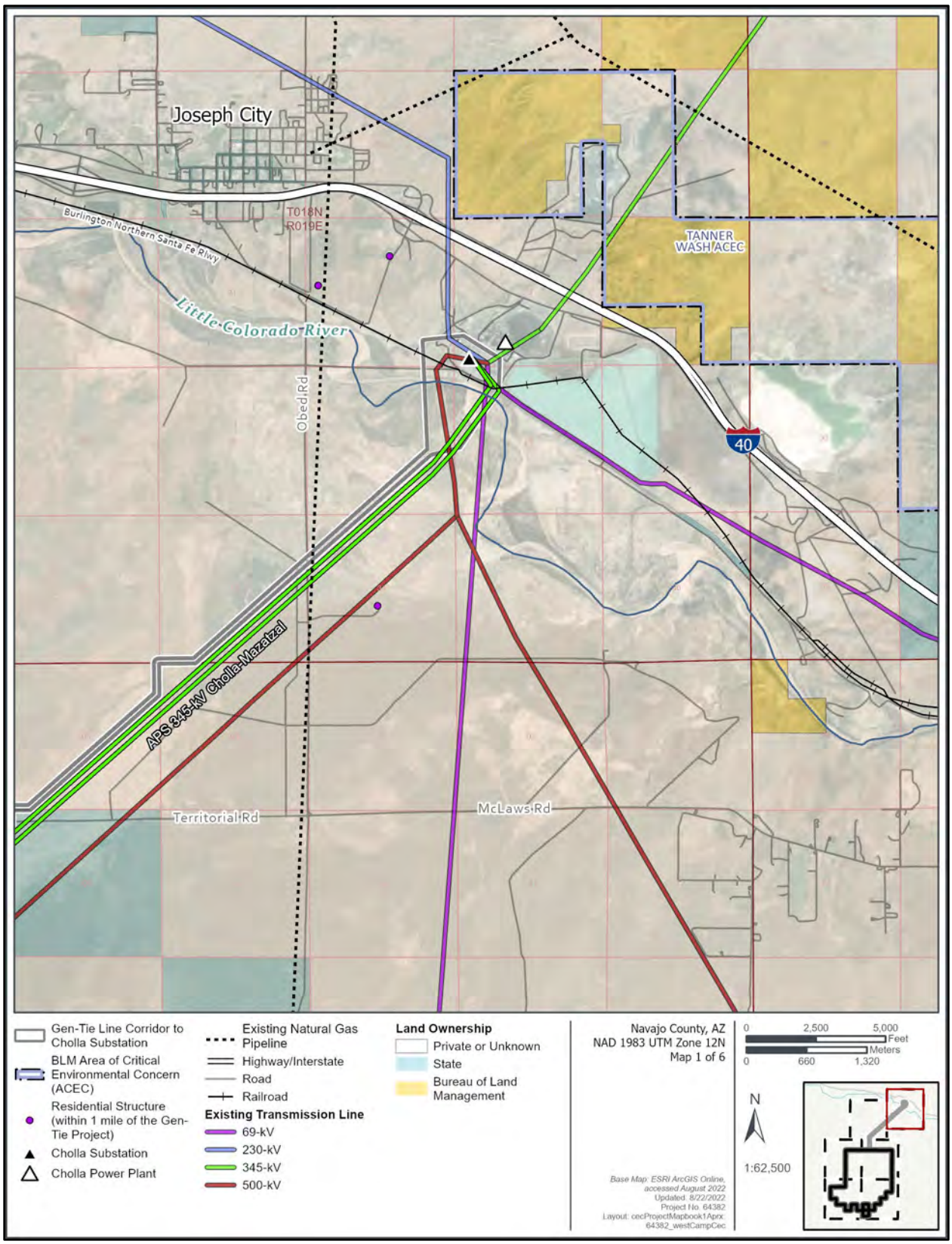

Figure A-3.1. Gen-Tie Project overview.

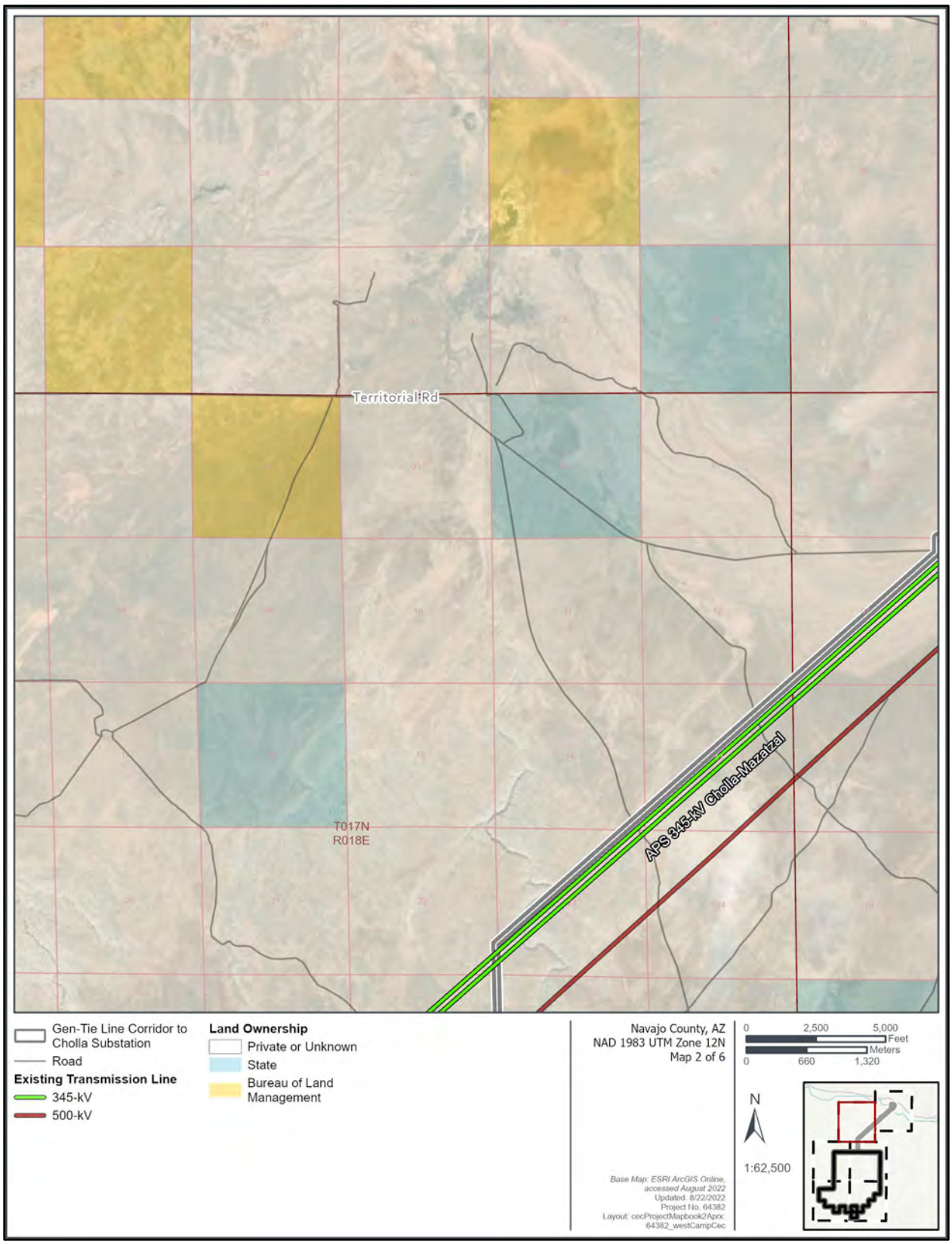

Figure A-3.2. Gen-Tie Project overview.

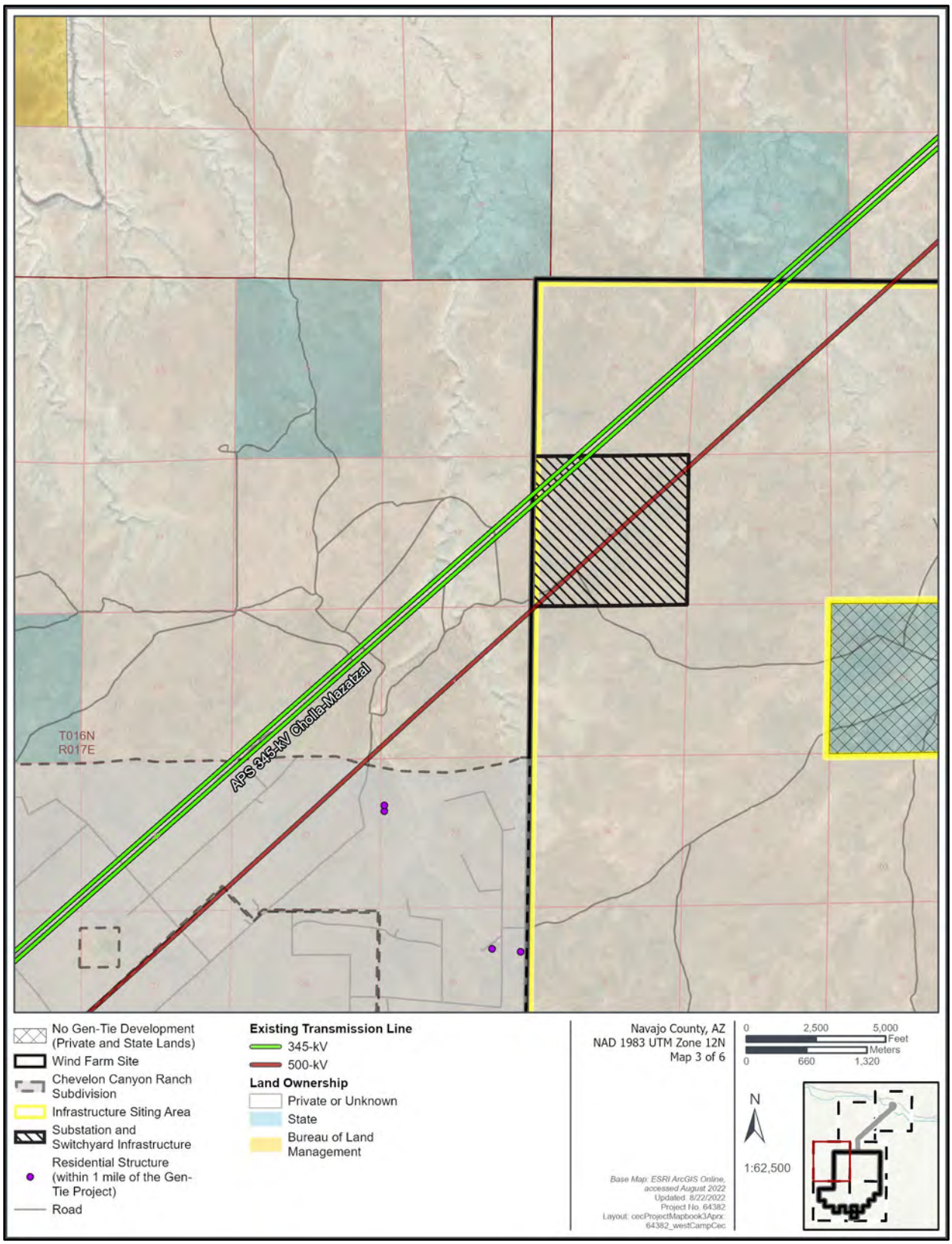

Figure A-3.3. Gen-Tie Project overview.

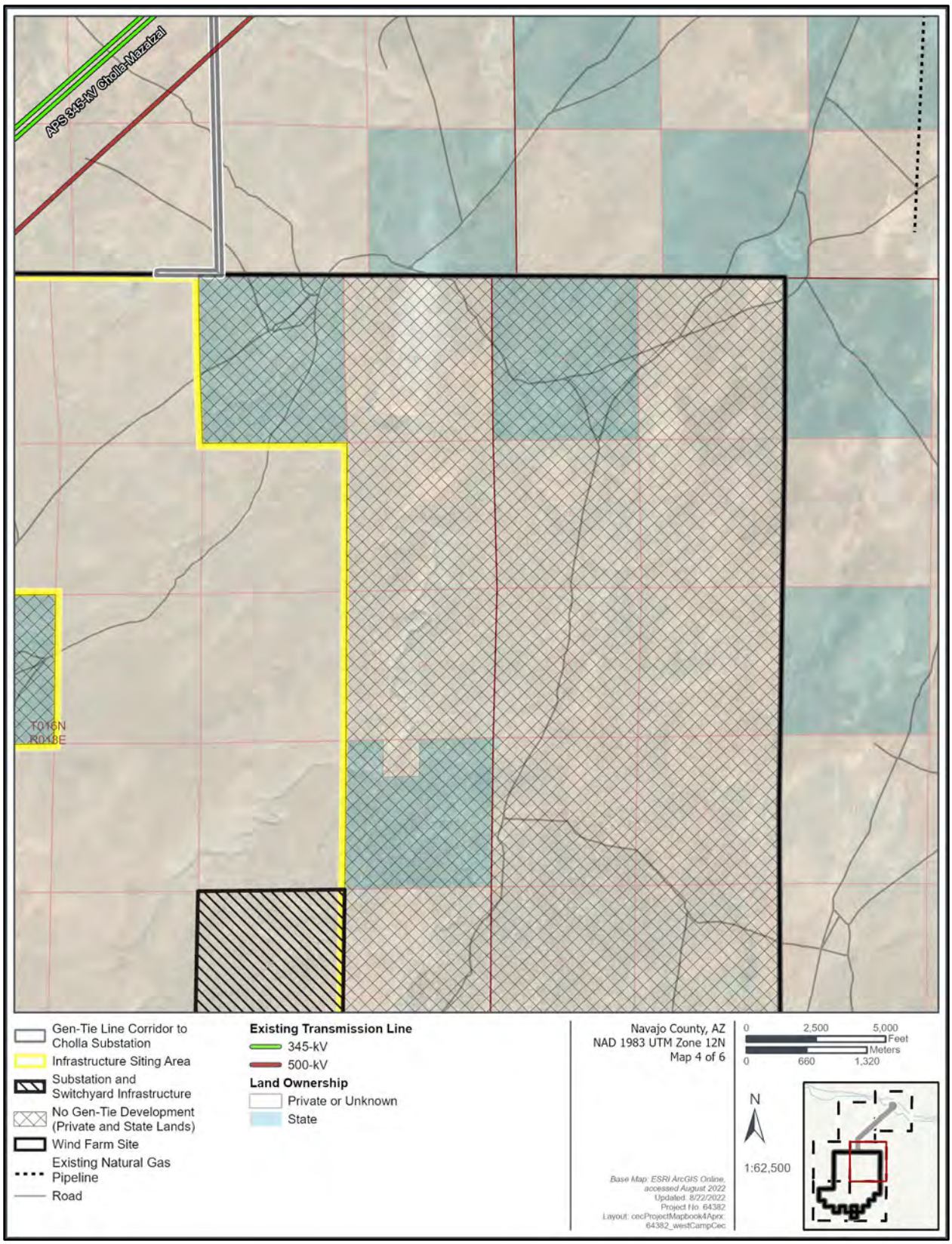

Figure A-3.4. Gen-Tie Project overview.

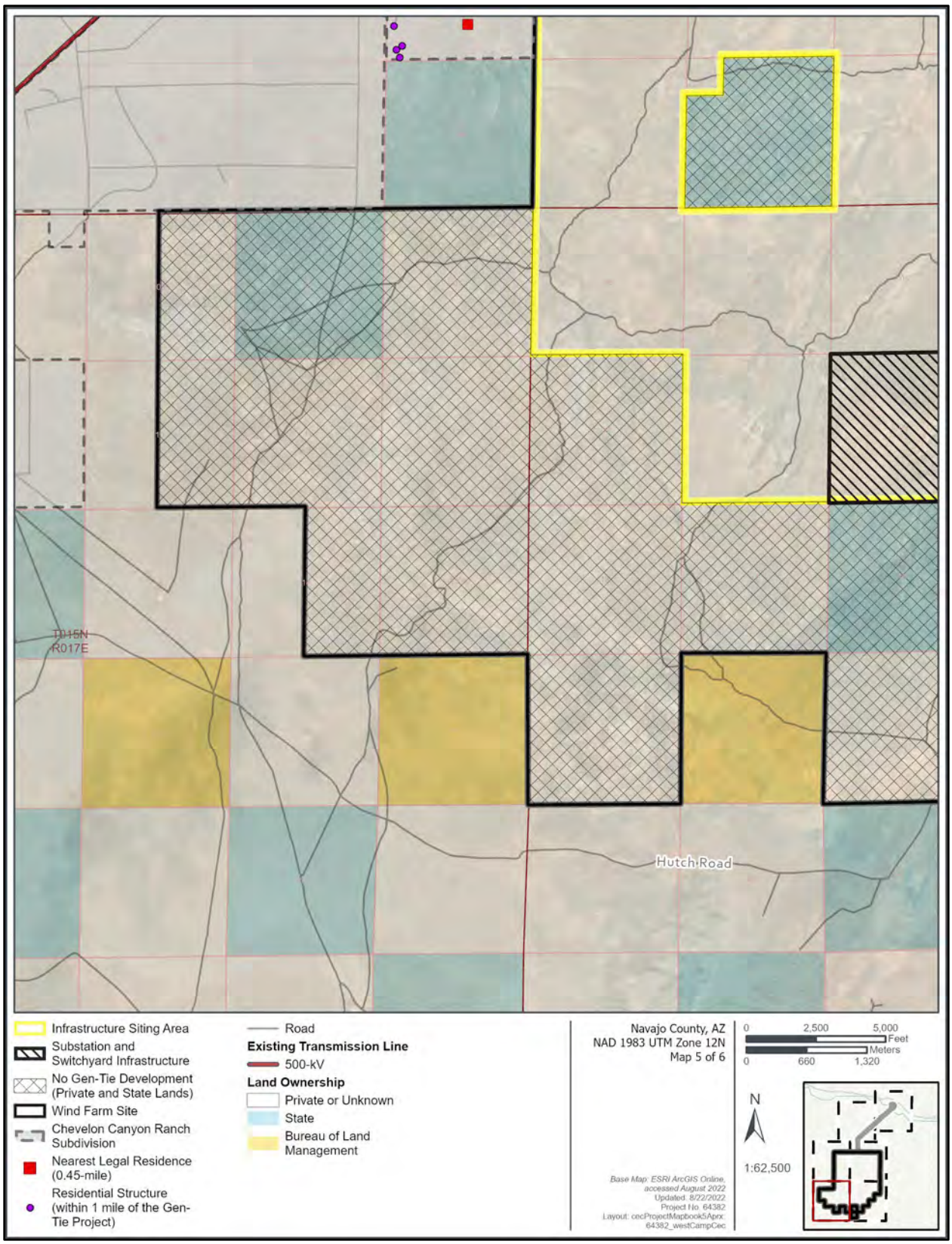

Figure A-3.5. Gen-Tie Project overview.

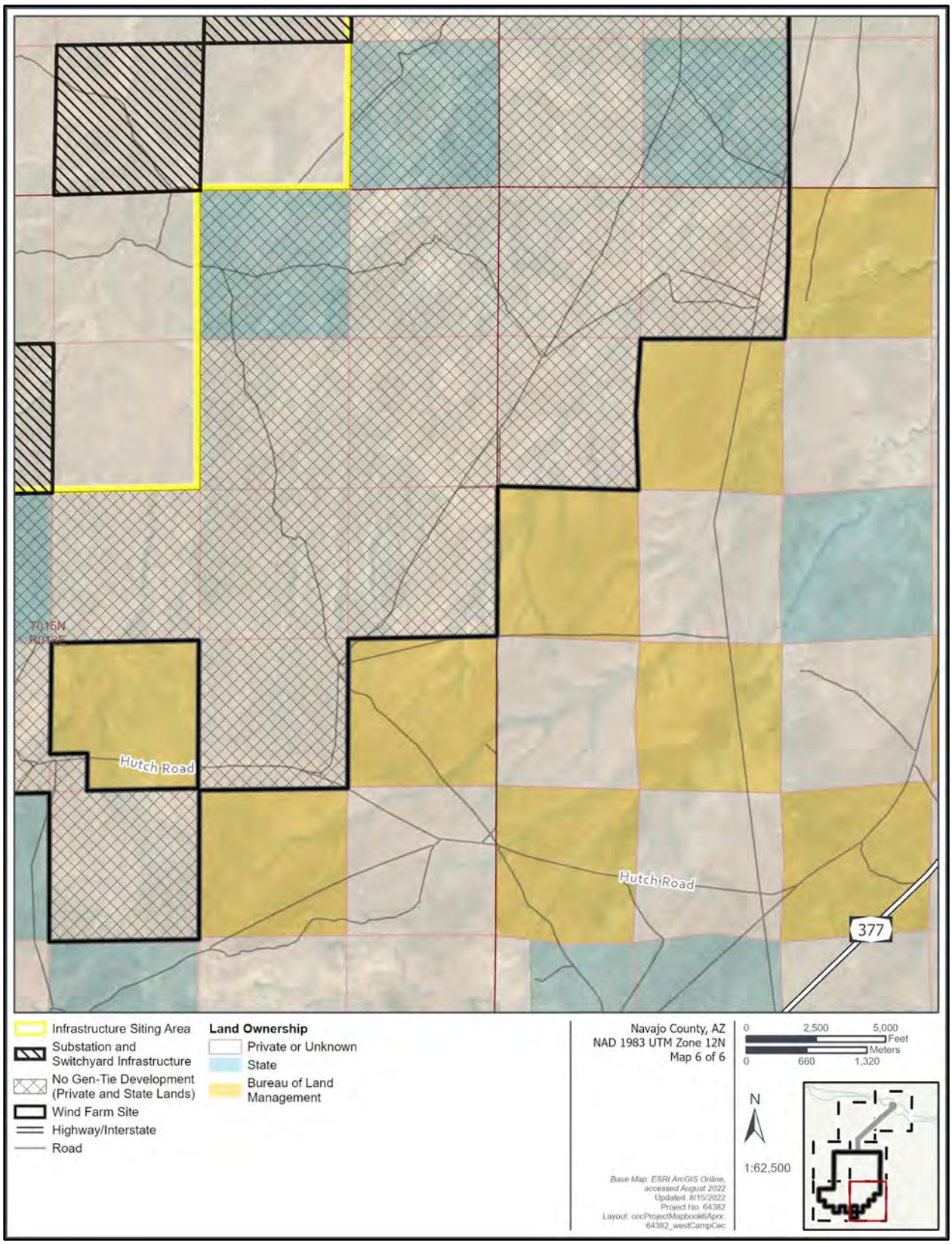

Figure A-3.6. Gen-Tie Project overview.

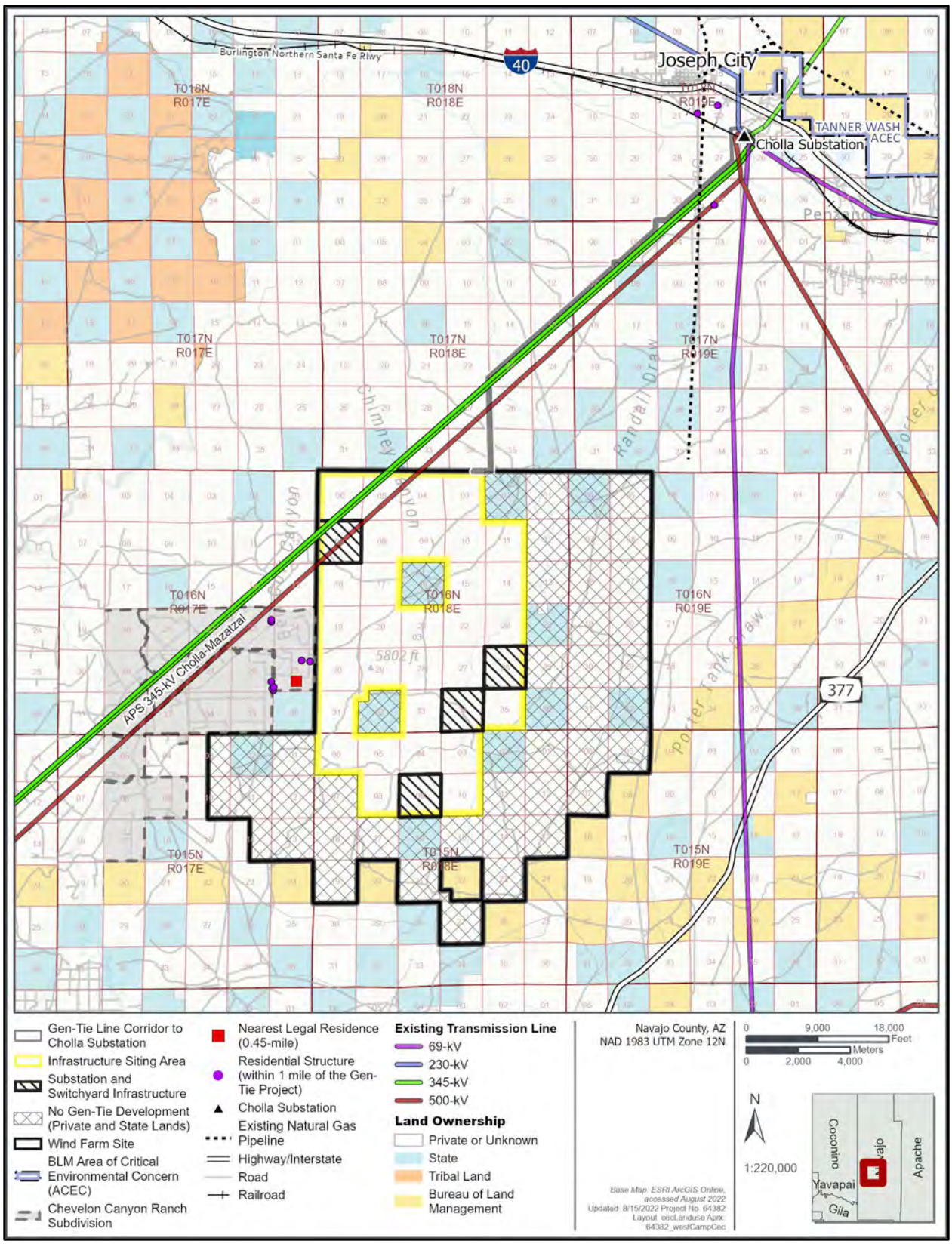

Figure A-4. Gen-Tie Project land use.

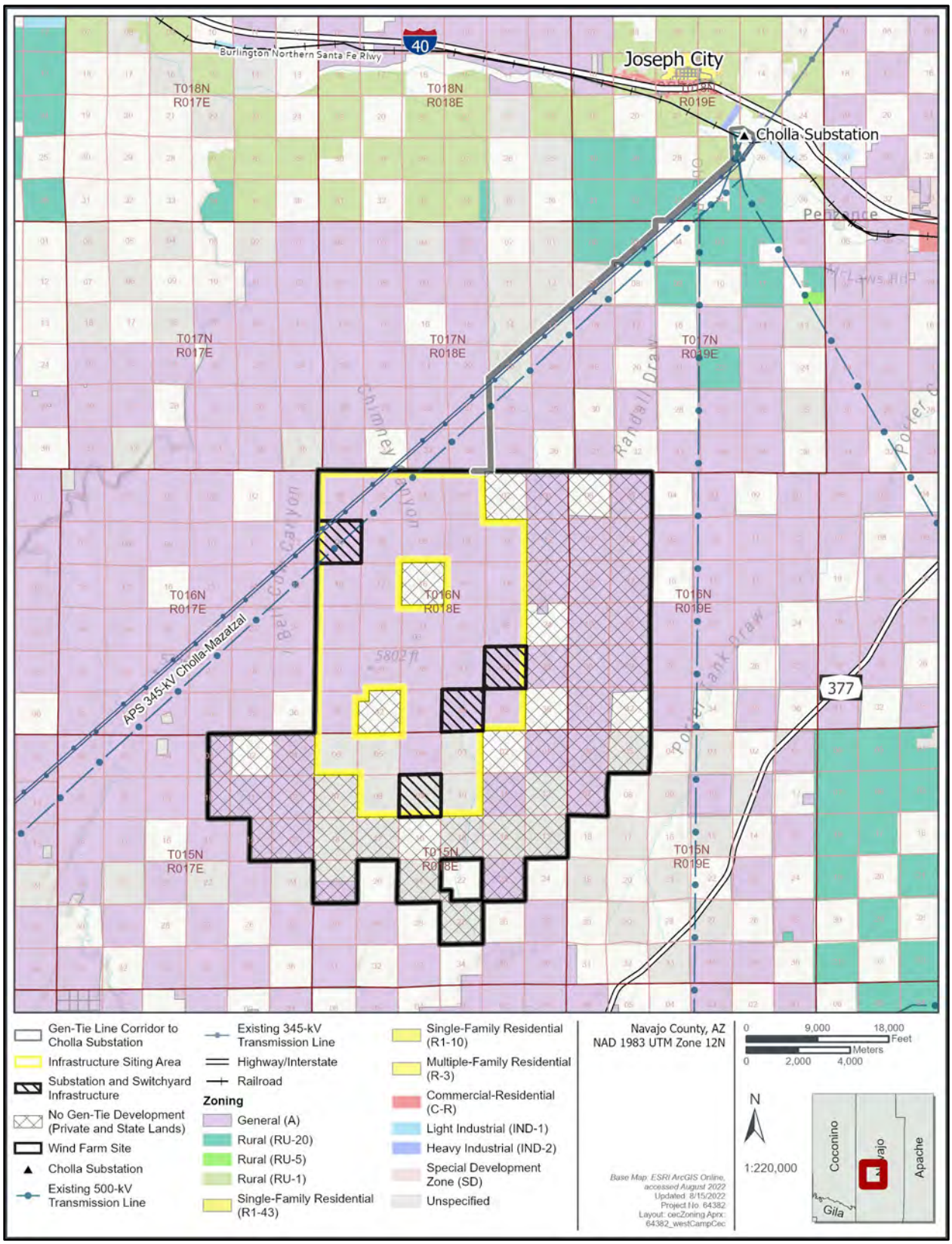

Figure A-5. Gen-Tie Project zoning.

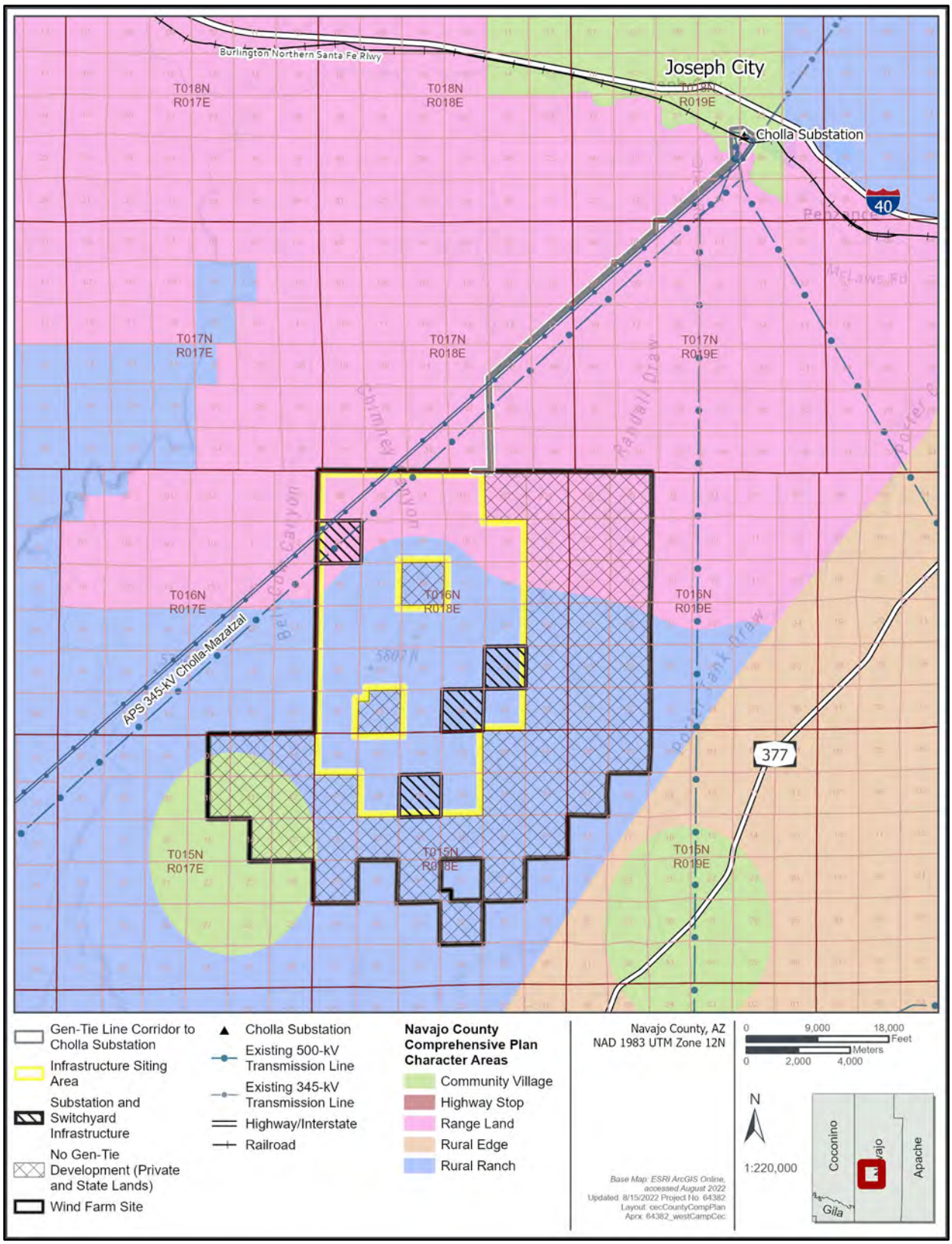

Figure A-6. Gen-Tie Project Comprehensive Plan character areas.

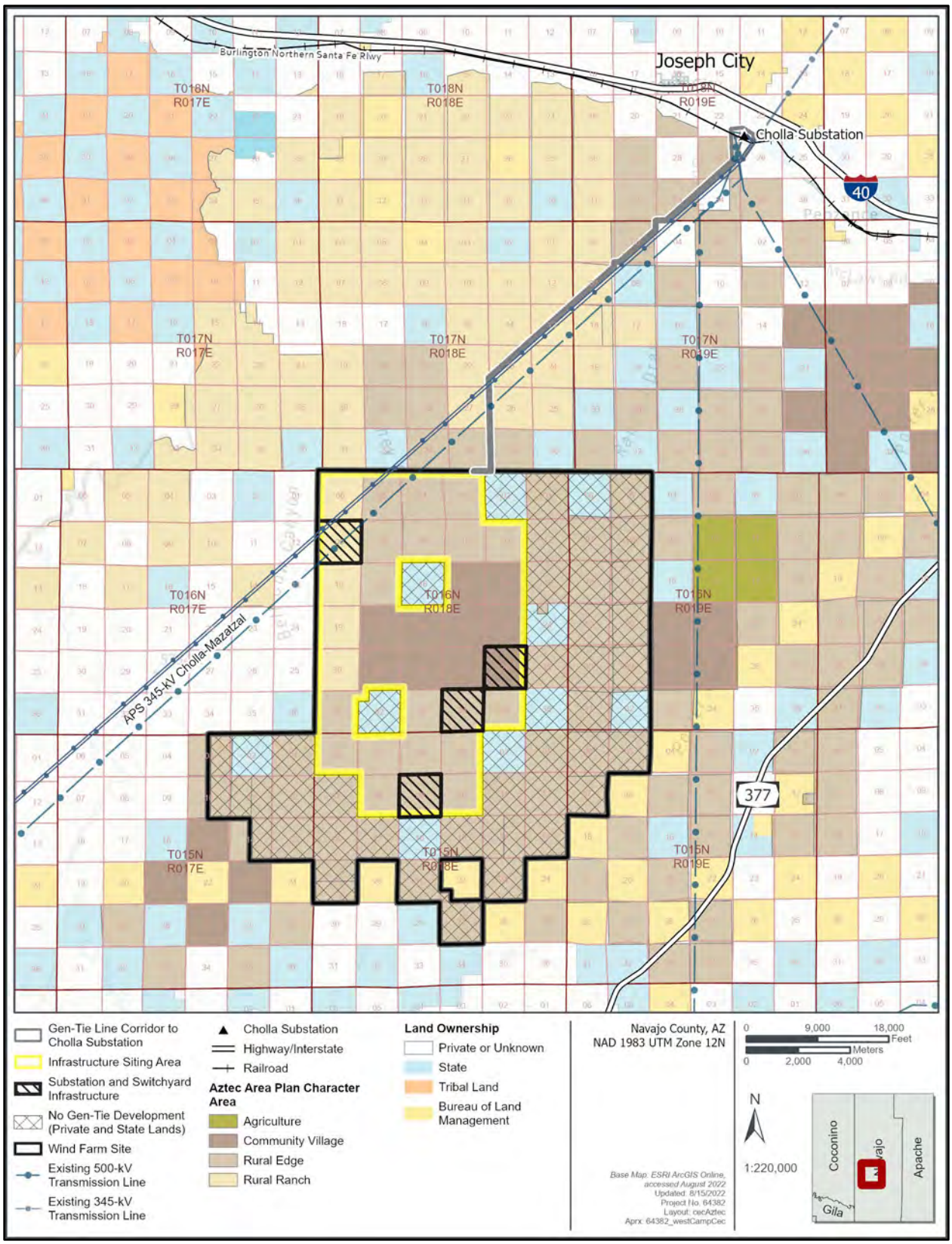

Figure A-7. Gen-Tie Project Aztec Area Plan character areas.

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EXHIBIT A – ATTACHMENT A-1

Landowner Letter

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AZTEC LAND AND CATTLE COMPANY, LIMITED

INCORPORATED 1884
4647 N. 32nd STREET, NO. 240
PHOENIX, ARIZONA 85018
(623) 772-6222
FAX (623) 772-0145

STEPHEN M. BROPHY
PRESIDENT

June 15, 2022

Via email

Mr. Cody Cooper
Navajo County Planning and Zoning
100 West Public Works Drive
PO Box 668
Holbrook, AZ 86025

Re: West Camp Wind Farm

Dear Mr. Cooper,

This letter is written in support of AES's proposed West Camp Wind Farm (the "Project") and to affirm the Project's compatibility with the Aztec Area Plan (the "Plan"). The Project is located across 70+ sections (~45,000 acres). Several of these sections were identified as suitable for wind energy development in the Plan. Several other sections are within the Powerline Corridor Overlay Zone. And all sections are located within character areas that both encourage economic development and allow for any zoning designation.

Thank you for your assistance in permitting the Project and please let us know if we can offer additional support or be of further assistance.

Sincerely,

Stephen M. Brophy

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EXHIBIT B

Environmental Studies

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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

The Applicant's consultant, SWCA Environmental Consultants, began conducting environmental studies at the proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) site in 2019. Some studies have been completed, some are ongoing, and others are planned (Table B-1). Completed reports are either attached to this exhibit or are included in subsequent exhibits as indicated in Table B-1. Ongoing and planned wildlife studies are described in the *Preconstruction Wildlife Survey Plan for the West Camp Wind Farm, Navajo County, Arizona*, which is provided in this exhibit as Attachment B-3.

No federal permitting or National Environmental Policy Act nexus is anticipated for the Gen-Tie Project; thus, no environmental report or environmental statement has been prepared for or by any federal agency.

Table B-1. Completed, Ongoing, and Planned Environmental Studies

Environmental Study	Study Status	Location in CEC Application
Wetlands and Other Waters of the U.S. Delineation Desktop Review	Completed	Exhibit B, Attachment B-1
Wildlife Site Characterization	Completed	Exhibit B, Attachment B-2
Wildlife Survey Plan	Completed	Exhibit B, Attachment B-3
Eagle and Other Large Bird Use Surveys	Ongoing	See Wildlife Survey Plan, Exhibit B, Attachment B-3
Small Bird Use Surveys	Ongoing	See Wildlife Survey Plan, Exhibit B, Attachment B-3
Eagle Nest Surveys	Ongoing	See Wildlife Survey Plan, Exhibit B, Attachment B-3
Non-eagle Species Nest Surveys	Ongoing	See Wildlife Survey Plan, Exhibit B, Attachment B-3
Bat Acoustic Surveys	Ongoing	See Wildlife Survey Plan, Exhibit B, Attachment B-3
Phase I Environmental Site Assessment	Planned	See discussion below
Cultural Resources	Completed	See Exhibit E
Scenic Areas	Completed	See Exhibit E
Recreation	Completed	See Exhibit F
Noise and Interference	Completed	See Exhibit I

Attached Studies

Wetlands and Other Waters of the U.S. Delineation Desktop Review

A desktop review of wetlands and other waters of the U.S. was completed in June 2022. The evaluation memorandum summarizing the results of the initial desktop review and outlining future steps to be taken in the delineation process is appended to this exhibit as Attachment B-1.

Wildlife Site Characterization

A Wildlife Site Characterization was completed in coordination with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service to gather existing information about the wildlife community potentially using the site and to identify additional data collection or information needs. That report is appended to this exhibit as Attachment B-2.

Preconstruction Wildlife Survey Plan

A Preconstruction Wildlife Survey Plan was prepared and reviewed by the U.S. Fish and Wildlife Service and Arizona Game and Fish Department. The plan, which is appended to this exhibit as Attachment B-3, describes the methods for site-specific preconstruction wildlife surveys that were initiated and are ongoing or will be completed in the future. Studies addressed in the report include:

- Eagle and Other Large Bird Use Surveys
- Small Bird Use Surveys
- Eagle Nest Surveys
- Non-eagle Species Nest Surveys
- Bat Acoustic Surveys

Planned Studies

Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) is performed to assess the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property that may present risks of harm to public health or the environment. Phase 1 ESAs satisfy part of the due diligence requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability for a commercial transaction. The Applicant will complete a Phase I ESA for the Gen-Tie Project in the fall of 2022.

EXHIBIT B – ATTACHMENT B-1

Wetlands and Other Waters of the U.S. Delineation Desktop Review of the West Camp Wind Farm

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Tucson Office
343 West Franklin Street
Tucson, AZ 85701
Tel 520.325.9194 Fax 520.325.2033
www.swca.com

Technical Memorandum

To: Robert Gardner
West Camp Wind Farm, LLC
282 Century Place #2000
Louisville, Colorado 80027

From: Russell Waldron, Senior Clean Water Act Specialist

Date: June 20, 2022

Re: **Wetlands and Other Waters of the U.S. Delineation Desktop Review of the West Camp Wind Farm Study Area in Navajo County, Arizona / SWCA Project No. 64382.01 / Special Land Use Permit No. (TBD)**

INTRODUCTION

West Camp Wind Farm, LLC, a wholly owned subsidiary of The AES Corporation, is proposing to develop a maximum 500-megawatt wind energy facility and associated generation-tie transmission line within Navajo County, Arizona. SWCA Environmental Consultants (SWCA) completed a desktop classification of the surface water features that would be potentially jurisdictional waters of the U.S. (WOTUS) to be used during the initial design of the West Camp Wind Farm (project). The project area (hereafter, study area) consists of the wind farm boundary and generation-tie transmission line route options (Figure 1). The northern boundary of the approximate 53,000-acre study area is located about 9 miles south of Joseph City (Figure 1). The study area consists of all of Sections 1–36, Township 16 North, Range 18 East; Sections 5–8, 17–20, and 29–32, Township 16 North, Range 19 East; Sections 5–7, Township 15 North, Range 19 East; Sections 1–19, 21, 22, 23, and 27, Township 15 North, Range 18E East; and Sections 1–3 and 10–14, Township 15 North, Range 17 East, of the Gila Salt River Baseline and Meridian (Figure 2). Landownership in the study area is a mixture of privately owned lands and Arizona State Trust lands administered by the Arizona State Land Department (ASLD) (Figures 1 and 2).

The project disturbance footprint—the area encompassing proposed project infrastructure—will be approximately 5% or less of the total study area. Project components will include up to 104 wind turbine generators, meteorological towers, 34.5 kV underground collector lines, a generation-tie transmission line and associated substations and switchyard facilities, a battery storage facility, an operations and maintenance building and laydown yard, and access roads. The wind turbines and associated components will be sited on private and Arizona State Trust lands. The generation-tie transmission line and associated facilities will be sited on private lands.

This desktop review of potential wetlands and other WOTUS was completed as part of a due diligence effort to determine an initial extent of the U.S. Army Corps of Engineers' (USACE's) jurisdiction under Section 404 of the Clean Water Act (CWA) within the study area and identify the Section 404 permitting options and requirements, if any, for the project.

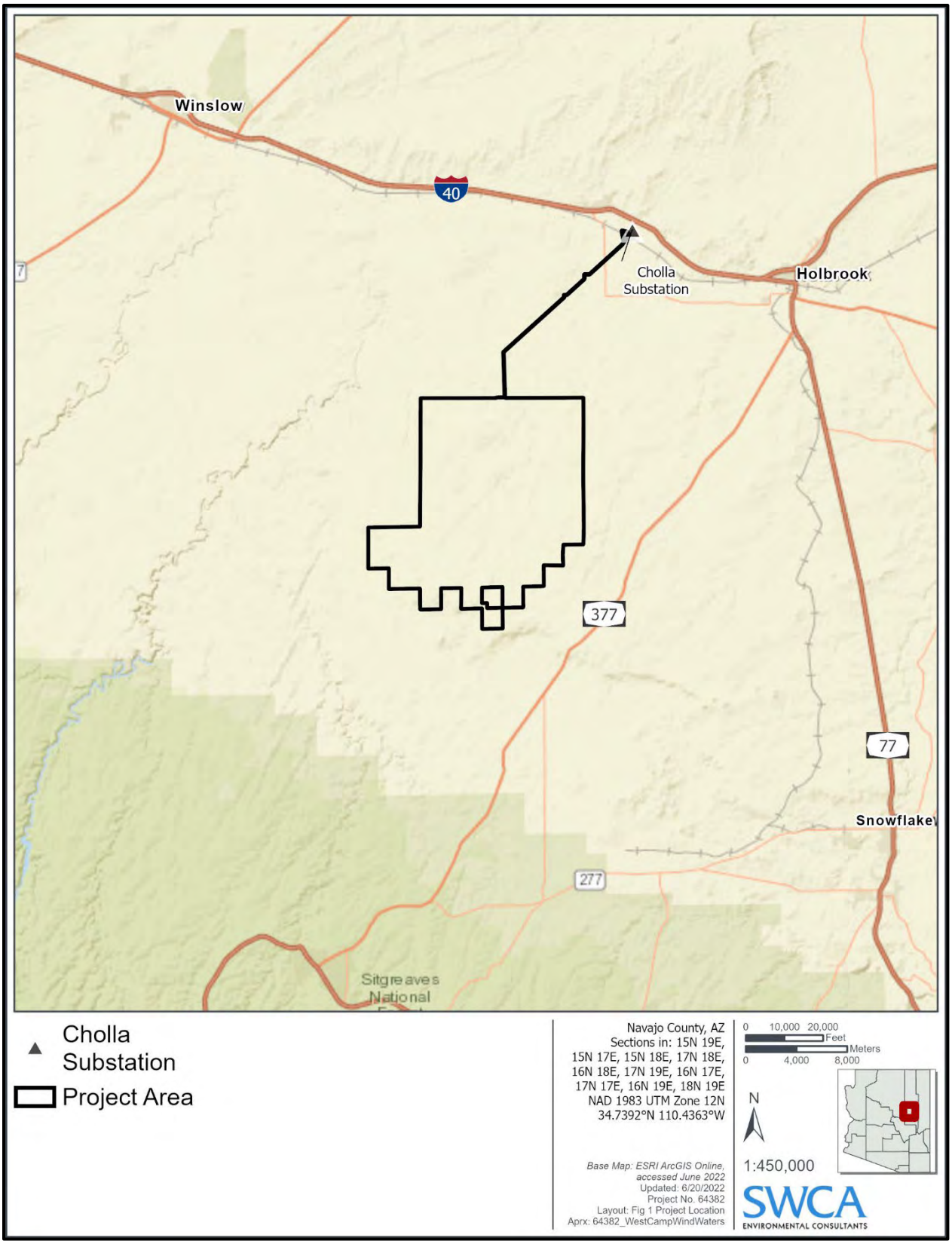

Figure 1. General project location.

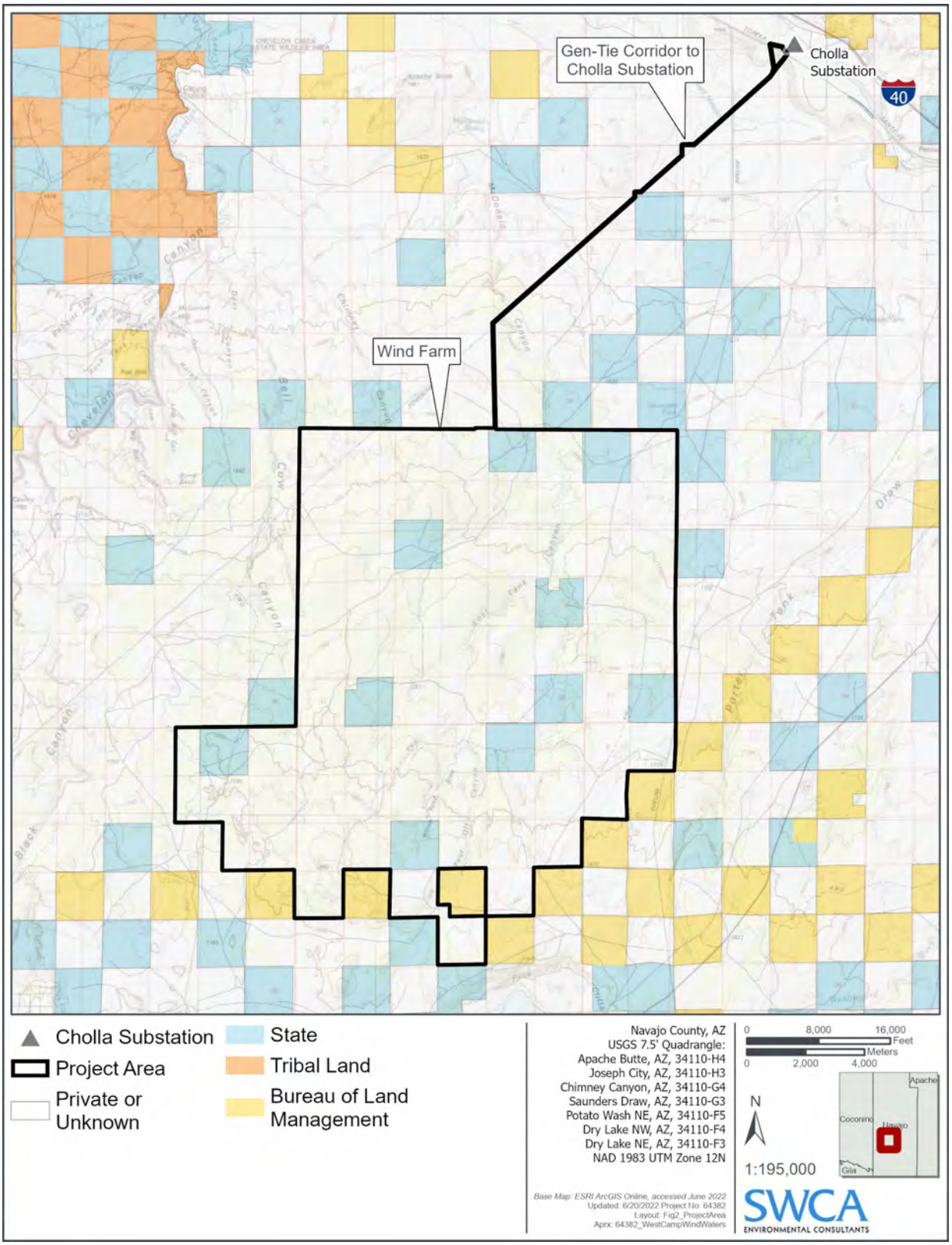

Figure 2. Project location.

METHODS

SWCA personnel completed a desktop review of the study area to identify potential WOTUS, including wetlands and other special aquatic sites as defined under the CWA,[1] by accessing public databases and studies to identify previously mapped surface water features in the study area. The following data sources were accessed:

- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) modeled flowlines
- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) modeled surface water features
- USGS Watershed Boundary Dataset
- USGS provisional digital land cover map for the southwestern United States
- Natural Resources Conservation Service (NRCS) Soil Survey data for the survey area
- Google Earth aerial imagery
- USGS topographic maps
- Federal Emergency Management Agency (FEMA) floodplain insurance rate maps
- SWCA report dated May 2022 and entitled *Wildlife Site Characterization for the West Camp Wind Farm, Navajo County, Arizona*

RESULTS

Project and Study Area Setting

The study area is within the Arizona/New Mexico Plateau Level 3 ecoregion[2] at elevations between approximately 5,000 and 6,100 feet. It is within the Grand Canyon physiographic section of the Colorado Plateau province[3] in northern Arizona. Topography at the site is generally characterized by flat to rolling terrain. Several shallow canyons are present across the site, generally oriented north-south.

Land uses in the study area include cattle ranching/grazing and hunting. Obed Road to the north and Hutch Road off State Route 377 to the east provide access to the site. Established two-track dirt roads are present throughout the study area.

Vegetation

The study area is within the Great Basin Conifer Woodland and Plains and Great Basin Grassland biotic communities[4]. Six dominant land/vegetation cover types are mapped by USGS within the study area: Inter-Mountain Basins (IMB) Semi-Desert Grassland Colorado Plateau Pinyon-Juniper Woodland, , IMB Juniper Savanna, IMB Semi-Desert Shrub Steppe, Colorado Plateau Mixed Low

[1] United States Code Title 33 Part 328.3(a).

[2] U.S. Environmental Protection Agency. 2011. EPA Ecoregions of the United States – Level III. Available at: https://databasin.org/datasets/ff7444d321c14e6da2e4ede30452798a. Accessed February 2022.

[3] Fenneman, N.M., and D.W. Johnson. 1946. Physiographic divisions of the conterminous U.S. Reston, Virginia: US. Geological Survey. Available at: https://water.usgs.gov/GIS/metadata/ usgswrd/XML/physio.xml. Accessed February 2022.

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

Sagebrush Shrubland, and IMB Greasewood Flat[5]. Eight other land-vegetation cover types are also mapped by USGS.

The study area is dominated by graminoids and forbs with an open shrub and tree layer. Denser juniper woodlands are present, particularly along drainages and in the northeastern portions of the study area. The dominant juniper species observed is oneseed juniper (*Juniperus monosperma*), with occasional twoneedle pinyon pines (*Pinus edulis*) interspersed. Large sections of the pinyon/juniper woodland have been treated in an effort to revert the landscape back to grassland. In addition to the reclaimed grassland areas, there are also natural grasslands present, primarily on the southeastern side of the study area. Characteristic grasses found throughout the area include mesa dropseed (*Sporobolus flexuosus*), sand dropseed (*Sporobolus cryptandrus*), spike dropseed (*Sporobolus contractus)*, blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), and ring muhly (*Muhlenbergia torreyi*). Shrubs observed include fourwing saltbush (*Atriplex canescens*), winterfat (*Krascheninnikovia lanata*), snakeweed (*Gutierrezia* sp.), Fremont's mahonia (*Mahonia fremontii*), Bigelow sage (*Artemisia bigelovii*), jointfir (*Ephedra* spp.), globemallow (*Sphaeralcea* spp.), Stansbury cliffrose (*Purshia stansburiana*), prickly Russian thistle (*Salsola tragus*), Whipple cholla (*Cylindropuntia whipplei*), narrowleaf yucca (*Yucca angustissima*), banana yucca (*Yucca baccata*), and pricklypear (*Opuntia* spp.).

Soils

Sixteen soil map units are mapped within the study area (Table 1). Soil components forming these units are mostly classified as well drained, with two being classified as excessively drained; none of the soils within these mapped units meet hydric criteria.

Table 1. Soil Units within the Study Area

Soil Unit	Acres (%)
Pensom-Chedeski complex, 1 to 5 percent slopes	16506.0 (31.3)
Leanto-Bisoodi complex, 1 to 12 percent slopes	11945.8 (22.6)
Mellenthin-Rock outcrop complex, 1 to 20 percent slopes	7243.0 (13.7)
Rock outcrop-Arches complex, 2 to 30 percent slopes	5203.9 (9.9)
Rock outcrop-Needle complex, 1 to 10 percent slopes	3917.3 (7.4)
Bisoodi fine sandy loam, 1 to 8 percent slopes	2628.0 (5.0)
Epikom channery sandy loam, 1 to 12 percent slopes	2506.2 (4.8)
Kech fine sandy loam, 1 to 12 percent slopes	864.5 (1.6)
Kech-Rock outcrop complex, 1 to 20 percent slopes	801.1 (1.5)
Leanto-Bisoodi-Rock outcrop complex, 1 to 20 percent slopes	406.5 (0.8)
Tours clay loam, 1 to 3 percent slopes	176.7 (0.3)
Radnik silt loam, 0 to 3 percent slopes	141.1 (0.3)
Cerrillos-Ubank complex, 1 to 8 percent slopes	114.2 (0.2)
Nuffel silt loam, 0 to 3 percent slopes	101.7 (0.2)
Cerrillos sandy loam, 1 to 10 percent slopes	69.6 (0.1)
Purgatory fine sandy loam, 1 to 8 percent slopes	45.2 (0.1)

[5] U.S. Geological Survey (USGS). 2016. Southwest Regional Gap Analysis Project. Available at: http://swregap.org/. Accessed February 2022.

Soil Unit	Acres (%)
Navajo silty clay, saline-sodic, 0 to 1 percent slopes	23.3 (< 0.1)
Ives fine sandy loam, wet, 0 to 1 percent slopes	16.6 (< 0.1)
Barx fine sandy loam, 3 to 10 percent slopes	13.9 (< 0.1)
Medisaprists, saline, 0 to 1 percent slopes	10.3 (< 0.1)
Jocity sandy clay loam, saline-sodic, 0 to 1 percent slopes	8.6 (< 0.1)
Tours silty clay loam, saline-sodic, 0 to 1 percent slopes	7.9 (< 0.1)
Riverwash-Typic Torrifluvents complex, 0 to 5 percent slopes	2.3 (< 0.1)

Source: NRCS (2022) soil unit data.[6]

Hydrology

The majority of the study area lies within the 209,616-acre McDonald Canyon-Little Colorado Watershed (10-digit Hydrologic Unit Code 1502000806), as defined by the USGS National Watershed Boundary Dataset.[7] Portions of the remaining study area lie in an additional four surrounding watersheds (Lower Chevelon Canyon, Black Canyon, Phoenix Park Wash-Dry Lake, and Porter Tank Draw-Little Colorado River). The study area is indicated on five FEMA Flood Insurance Rate Map (FIRM) panels (04017C3525E, 04017C3550E, 04017C3725E, 04017C3750E, and 04017C37275E) and lies within Zone X, areas of minimal flood hazard, except along select drainages which contain relatively narrow and linear areas mapped as Zone A, areas with a 1% flood hazard without base flood elevations.[8] The average annual precipitation from 2002 to 2021 for the nearby Winslow Airport, Arizona, was 6.07 inches.[9]

Notable water features within the region include the Little Colorado River just south of Joseph City, which is approximately 9 miles north of the wind farm area at the northern end of the generation-tie corridor, and Silver Creek, approximately 15 miles to the east of the study area. Chevelon Creek is approximately 4 miles from the northwest corner of the study area and Dry Lake is approximately 1.5 miles to the south. The general flow pattern across the study area is south to north towards the Little Colorado River.

The USFWS NWI dataset identified modeled surface water features within the study area, including approximately 8.8 acres of freshwater ponds and approximately 303.6 acres of riverine features. The NHD review indicated approximately 126.6 miles of modeled ephemeral linear flowlines and approximately 8.6 acres of waterbodies within the study area (Table 2). All the NHD flowlines within the study area are associated with NWI riverine features and all but one of NHD waterbodies are associated with NWI freshwater ponds (Figures 3 and 4).

[6] Natural Resources Conservation Service. 2022. Custom soil resource report for Coconino County Area, Arizona, Central Part. Report generated using online database available at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm. Accessed May 2022.

[7] U.S. Geological Survey (USGS). 2022. National Watershed Boundary Dataset. Available at: https://nhd.usgs.gov/wbd.html. Accessed May 2022.

[8] Federal Emergency Management Agency. 2022. FEMA Flood Map Service Center. Available at https://msc.fema.gov/portal/home. Accessed May 2022.

[9] National Oceanic and Atmospheric Administration. 2022. Applied Climate Information System. Available at: http://agacis.rcc-acis.org/. Accessed May 2022.

Table 2. NWI and NHD Features within the Study Area

NWI Code[10] or NHD Feature Type	Code Translation	Quantity within Study Area	Associated Feature(s)
R4SBC	Riverine, intermittent, streambed, seasonally flooded	236.8 acres	Ephemeral drainages
R4SBJ	Riverine, intermittent, streambed, intermittently flooded	63.7 acres	Ephemeral drainages
R4SBA	Riverine, intermittent, streambed, temporarily flooded	2.2 acres	Little Colorado River
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	0.8 acres	Livestock tanks
PUSAh	Palustrine, unconsolidated shore, temporarily flooded, diked/impounded	1.3 acres	Livestock tanks
PUSAx	Palustrine, unconsolidated shore, temporarily flooded, excavated	0.4 acres	Livestock tanks
PUSJh	Palustrine, unconsolidated shore, intermittently flooded, diked/impounded	7.1 acres	Livestock tanks
Flowline	Ephemeral stream/river or artificial path	126.6 miles	Ephemeral drainages
Waterbody	Intermittent lake/pond	8.6 acres	10 livestock tanks, 9 named and 1 unnamed

The R5UBH NWI features are mapped as "unknown perennial"; however, no perennial surface water features or sources (such as springs or seeps) were observed within the study area during biological site reconnaissance visits conducted between October 2019 through September 2021 and January 2022[11]. There are potential wetlands in the study area in the form of freshwater ponds constructed along the ephemeral drainages to capture stormwater flows for livestock use (e.g., Chamise Tank and Big Oil Well Tank) and drainages (e.g., Lost Tank Canyon and Pour Off Canyon). The R5UBH NWI features are associated with the inlets and outlets of the livestock tanks in the study area, including White Tank, Lower Bigler Tank, Red Tank, and others. During the biological site reconnaissance visit, SWCA noted that these stock tanks lack shrub/tree riparian vegetation and all but one lacked emergent wetland vegetation. Cement Tank, on the east side of the study area, is formed by a cement revetment damming a shallow, narrow canyon that flows intermittently. Senescent rushes (*Juncus* spp.) were observed during the biological site reconnaissance visit, indicating that riparian vegetation may grow at this location seasonally, primarily after summer monsoon storms.

[10] Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Home Page. Available at: http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm (Version 04DEC98). Accessed May 2022.

[11] SWCA 2022, *Wildlife Site Characterization for the West Camp Wind Farm, Navajo County, Arizona*. June 2022. SWCA Environmental Consultants, Flagstaff, Arizona.

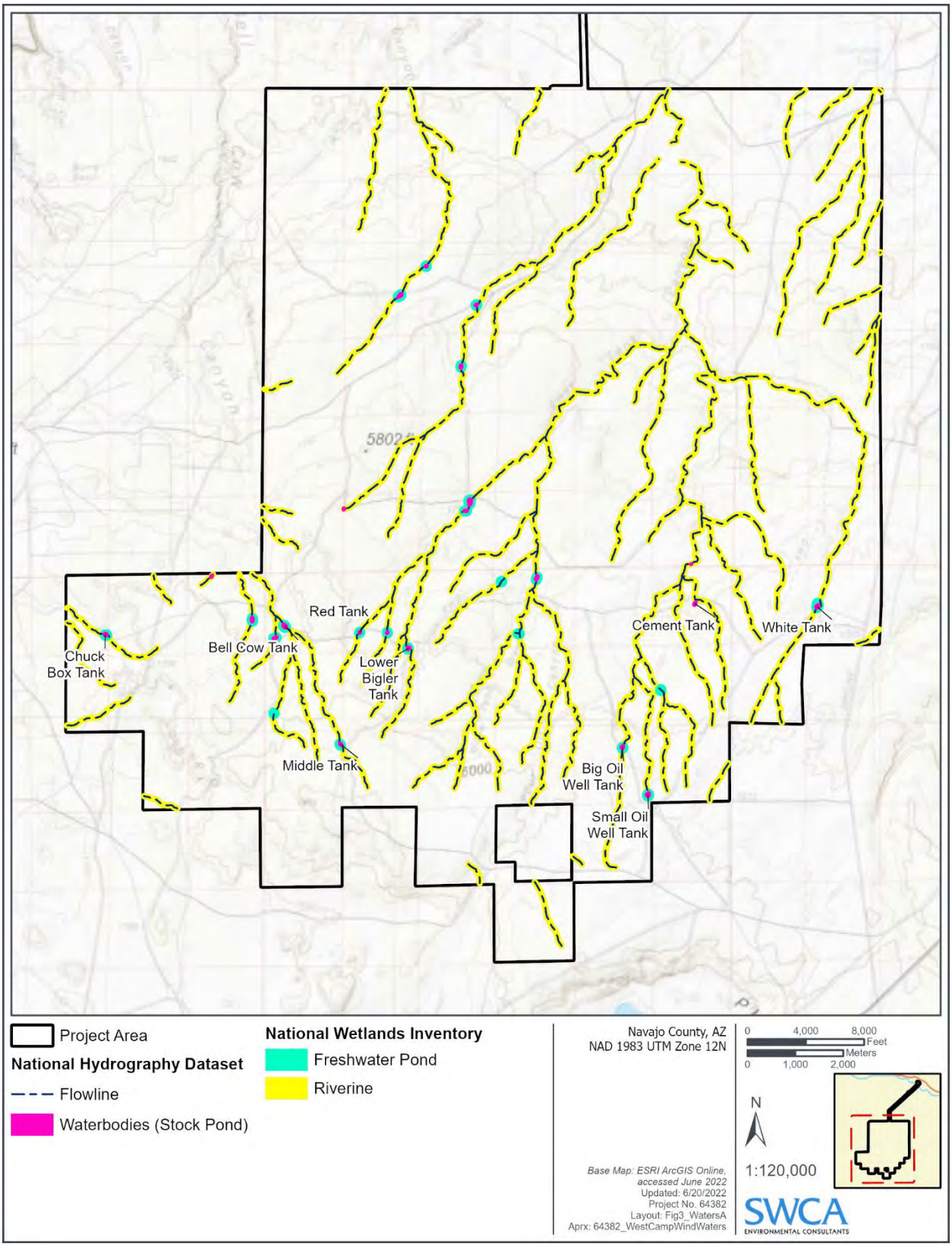

Figure 3. NHD and NWI surface water features in the Study Area.

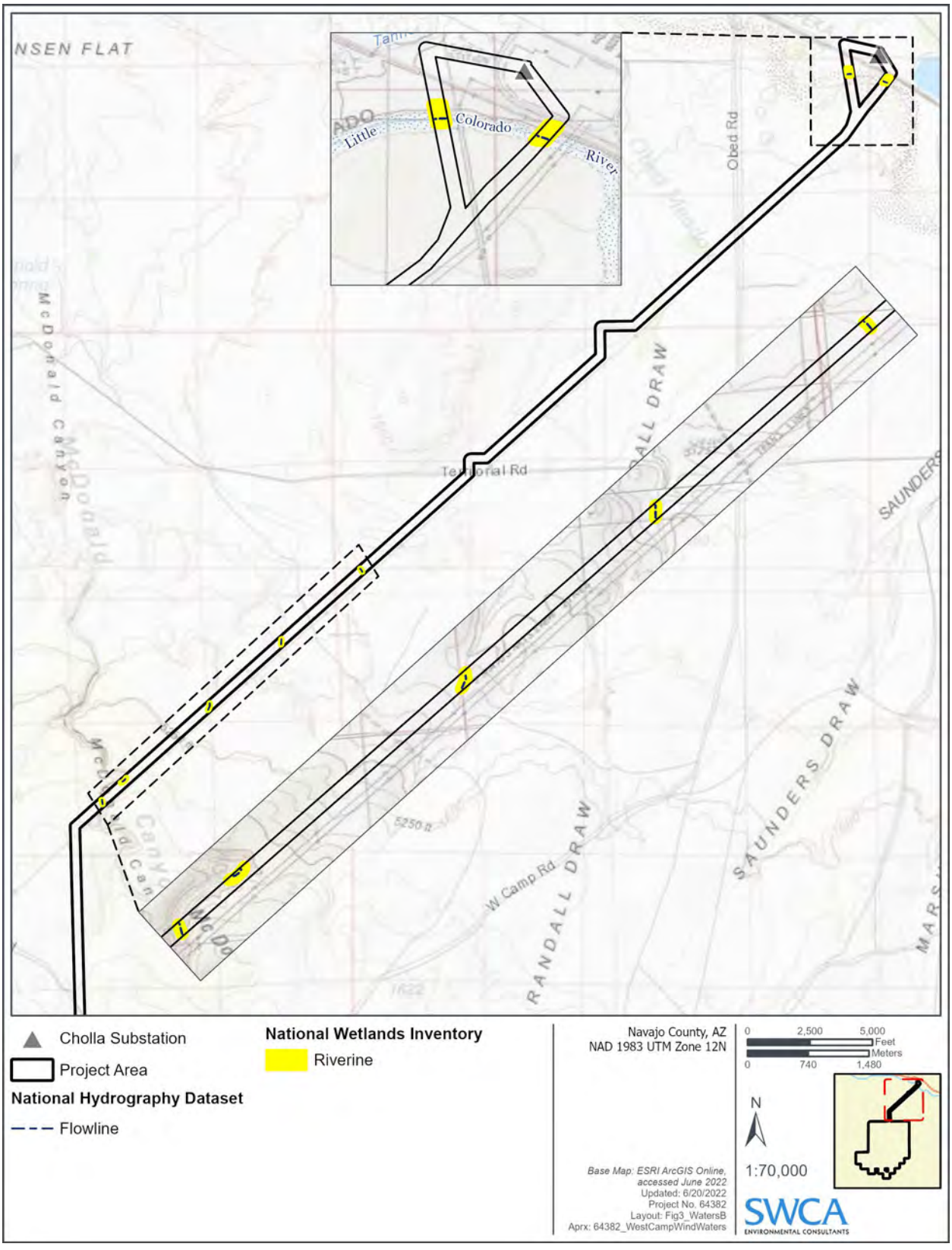

Figure 4. NHD and NWI surface water features intersecting the generation-tie transmission line corridor.

Potentially Jurisdictional Wetlands and Other Waters of the US

The results of the desktop research indicated that there are ephemeral surface water features present in the study area that may be potentially jurisdictional WOTUS. The livestock tanks and R5UBH features associated with the ephemeral streams in the study area would likely be non-jurisdictional if they are manmade features constructed entirely in uplands. However, if it can be shown that any one of the tanks exhibit all three USACE indicators of wetlands; specifically, a dominance of hydrophytic vegetation, wetland hydrology, and development of hydric soil, that tank would likely be considered jurisdictional.

CLEAN WATER ACT SECTION 404 PERMITTING OVERVIEW

CWA Section 404 permitting is a two-step process. The first step is to determine the geographic area of the USACE jurisdiction (i.e., WOTUS) as described above. If the surface water features on a project area are determined not to be WOTUS (i.e., no features within the geographical jurisdiction of the USACE) by the USACE through a standalone written jurisdictional determination, then Section 404 does not apply and there is no need to proceed to the second (i.e., permitting) step. There are two types of jurisdictional determinations: an approved jurisdictional determination (AJD) and a preliminary jurisdictional determination (PJD). Under an AJD, surface water features must display an ordinary high water mark (OHWM) and have a significant nexus on the nearest downstream traditional navigable water (TNW) in order to be considered a WOTUS and subject to CWA Section 404 permitting regulations. Under a PJD, surface water features must only display an OHWM, and connectivity or nexus to the nearest downstream TNW is not a consideration; in effect the USACE and applicant agree, for streamlined Section 404 permitting purposes, on the geographic limits of the USACE jurisdiction.

The second step, if there are WOTUS identified under step one, is to determine the type of Section 404 Permit (standard individual permit or nationwide permit [NWP]) required by type, location, and amount of unavoidable project-related fill activities to WOTUS features. If project-related fill activities result in permanent impacts (i.e., loss) of greater than 0.5 acre of WOTUS (below the plane of the OHWM) for the entire project area, then a standard individual permit would be required and an applicant would need to provide significant documentation to prepare an environmental assessment, including an alternatives analysis that presents the proposed action as the least environmentally damaging practicable alternative. The USACE can take between 12 and 18 months to process this type of permit, and the applicant may need significant resources to prepare the application and supporting documentation required.

The more streamlined permit for activities that result in less than 0.5 acre of permanent impacts to WOTUS is the NWP program, which has 57 different permits, depending on the type of fill activity. Depending on the type of fill activity, amount of fill involved (generally less than 0.1 acre of permanent fill to WOTUS), and NWP, project-related impacts can sometimes be permitted under a non-notifying situation where all the terms and conditions of the nationwide permit program must be followed, but the applicant does not need to file an application for verification of coverage with the USACE before proceeding with the activity. A non-notifying NWP has no processing time because the USACE does not review; however, it is recommended that the applicant prepare due diligence documentation demonstrating that the project-related activities are compliant with all the terms and conditions of the NWP program, including the conditions relating to thresholds for having to notify the USACE.

In some cases, the type of fill activity, or amount of fill (more than 0.1 acre and less than 0.5 acre of permanent fill to WOTUS) requires verification of coverage (i.e., authorization of the activity) by the USACE through an applicant-prepared pre-construction notification (PCN). The PCN provides documentation to the USACE for verification purposes. The PCN process can take between 60 and 90 days, depending on the complexity of the project and whether consultations between the USACE and

other agencies such as the U.S. Fish and Wildlife Service and the State Historic Preservation Office are necessary. The PCN preparation is a moderate level of complexity and requires a biological evaluation of the effect of the fill activities (i.e., in the Section 404 permit area only) on species listed as threatened or endangered under the Endangered Species Act, as well as a cultural resources Class III survey and report to determine whether cultural resources are present in the Section 404 permit area. In addition, engineering drawings and calculations of fill types and volumes must be provided as part of the PCN package.

RECOMMENDATIONS

Field Verification of Surface Waters

All surface water features identified during the desktop review should be verified by conducting field jurisdictional delineations within the project area footprint. During those surveys, photos of the features would be taken, and the presence or absence of OHWM indicators would be noted allowing recommendations of whether each feature is a WOTUS. Once the survey is complete, a preliminary jurisdictional delineation map would be developed to inform the project's final design and Section 404 permitting option.

Project Design Considerations

To the extent practicable, the project should be designed to avoid placing project components within the OHWMs of surface water features (i.e., potential WOTUS). The generation-tie line would span potential WOTUS aerially, but the line structures should be sited to avoid potential WOTUS, Similarly, turbine towers and their pads should be sited to avoid potential WOTUS. Other project components, such as access roads and buried collector lines, will likely need to cross potential WOTUS and the number of crossings should be minimized, and considerations made to co-locate the roads and lines as much as possible.

Clean Water Act Section 404 Permitting Scenarios

The project would likely require coverage under a CWA Section 404 permit because the wind farm development would impact potential WOTUS both temporarily during collector line installation and permanently for access road construction. Permanent impacts are further defined as a "loss of WOTUS"[12], and temporary impacts are those that occur during permitted activities, but for which the WOTUS are "…restored to preconstruction contours and elevations…"[13] so that the activities' impacts to functions and services of the WOTUS are not permanent.

The project could possibly be permitted under Nationwide Permit #51 (NWP #51) for Land-Based Renewable Energy Generation Facilities; however, this permit has a maximum 0.5-acre threshold for loss of WOTUS for all components associated with the project and the combined amount of WOTUS loss associated with the project would likely exceed this threshold. Even if the combined WOTUS loss associated with the project can be kept below the 0.5-acre threshold of NWP #51, this permit requires a PCN to be submitted to the USACE for review and verification that the activity meets all the terms and conditions of the NWP program.

Assuming that the project can be designed to avoid WOTUS except at access road and collector line crossings, it is recommended that a combination of NWPs is used: NWP #14 Linear Transportation

[12] *Federal Register* 86[8]:2876

[13] *Federal Register* 86[8]:2876

Projects for the access roads and NWP #57 Utility Line and Telecommunications Activities for the collector lines. Both NWPs (14 and 57) have thresholds of a maximum of 0.5 acre of loss per wash crossing. If loss of WOTUS at any road or utility crossings are 0.1 acre or higher (but less than 0.5 acre), then PCN is required. For those projects in which all the loss of WOTUS falls below 0.1 acre and there are no other PCN submittal triggers, such as potential effects on threatened or endangered species or cultural resources impacts within 100 feet of an impact area (temporary or permanent, i.e., a road or utility crossing), the project would qualify for non-notifying coverage under the NWP program. All Section 404 permit-specific, general, and regional terms and conditions would be in full effect and all construction, operation, and maintenance activities must be compliant with all applicable terms and conditions.

For the purposes of calculating permanent impacts on a per-WOTUS basis when there are multiple road or utility crossings of the same WOTUS, the USACE provides guidance under its definition for "single and complete linear project" (*Federal Register* 86[8]:2877). This definition states, "For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization." While there is no written guidance on the definition of "distant," experience suggests that this distance is generally between 0.5 and 1.0 mile for projects in the arid West region.

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 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.

EXHIBIT B – ATTACHMENT B-2

Wildlife Site Characterization for the West Camp Wind Farm, Navajo County, Arizona

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Wildlife Site Characterization for the West Camp Wind Farm, Navajo County, Arizona

JUNE 2022

PREPARED FOR

West Camp Wind Farm, LLC

PREPARED BY

SWCA Environmental Consultants

WILDLIFE SITE CHARACTERIZATION FOR THE WEST CAMP WIND FARM, NAVAJO COUNTY, ARIZONA

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SWCA Project No. 64382

June 2022

EXECUTIVE SUMMARY

West Camp Wind Farm, LLC, a wholly owned subsidiary of The AES Corporation (AES), is proposing to develop a wind energy facility in Navajo County, Arizona. The proposed 52,500-acre project area is located on private and state lands approximately 10 miles south of Joseph City. The project is evaluating several generation-tie (gen-tie) options, including one interconnection option within the project area (wind development area) and two interconnect options with a gen-tie corridor external to the project area. For the purposes of this report, the project area and external gen-tie corridor are distinguished from each other. SWCA Environmental Consultants prepared this wildlife site characterization to provide an initial landscape-scale screening and site-level characterization of the proposed project. The report addresses the U.S. Fish and Wildlife Service's *Land-Based Wind Energy Guidelines* Tiers 1 and 2 (preliminary site evaluation and site characterization) and *Eagle Conservation Plan Guidance* Stage 1 (site assessment), as well as the Arizona Game and Fish Department's (AGFD's) *Guidelines for Reducing Impacts to Wildlife from Wind Energy Development in Arizona*.

Objectives were addressed through desktop evaluation of publicly available information, communication with AGFD's experts, a site visit on January 27, 2022, and repeated visits to the site (on foot and by helicopter) during initial preconstruction wildlife surveys from October 2019 to November 2021. A summary of findings and next steps is presented in the last section of this report. The purpose of this evaluation is to:

- Address federal and state guidance landscape-scale screening and site-level characterization objectives, including gathering an understanding of the wildlife community potentially using the site.
- Determine additional data collection or information needs at this stage. Specific data gaps identified in this report include the following:
    - The extent to which special-status species are present.
    - The extent to which important golden eagle use areas (e.g., occupied eagle nests, or concentrated flight paths indicating areas that the species would rely on for breeding, feeding, or sheltering activities) are present within or near the project footprint.
    - Location and characterization of other areas of seasonal importance (e.g., bat maternity colonies or hibernacula sites, raptor nests).
    - Specific baseline bird and bat species composition and use (temporal and spatial).
    - Compensation requirements associated with Arizona Native Plant Law–protected species in areas of State lands planned for development.
    - Whether there would be significant adverse impacts to special-status species, considering the design of the project.

Upon delivery of this report, AES is requesting a recommendation letter for the project from AGFD's Project Evaluation Program to support county and line siting permitting.

Tier 3 preconstruction wildlife surveys and reporting, which will provide quantitative and qualitative assessments used to further evaluate risk and make siting and operational decisions, are ongoing.

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Appendices

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Tables

1 INTRODUCTION

West Camp Wind Farm, LLC, a wholly owned subsidiary of The AES Corporation (AES), is proposing to develop the West Camp Wind Farm (project). The project is a proposed maximum 500-megawatt (MW) wind energy facility and associated generation-tie (gen-tie) transmission line. The project would be located almost entirely on private lands, with minor utilization of Arizona State Trust lands, within an approximately 52,500-acre project area 10 miles southwest of Joseph City, Navajo County, Arizona (Figures 1 and 2). A federal nexus is not anticipated for the siting of this project.

The project is evaluating several gen-tie options to interconnect with the regional transmission grid. These options include up to 11-mile-long gen-tie and onsite line-tap within the project area (wind development area), or a 17-mile or 25-mile-long gen-tie connecting the project to the Arizona Public Service (APS) Cholla Substation 2 miles southeast of Joseph City. The gen-tie options with an interconnection to the Cholla Substation include a 150-foot-wide corridor external to the project area (Figure 1 and 2). Within the project area, the gen-tie options would be sited within 500-foot-wide corridors; however, the specific location of the internal corridors are not yet known. In this report, the term project area is inclusive of the internal gen-tie corridors and the term gen-tie refers only to the external gen-tie corridor. Further definitions for project terminology used in this report are provided in Section 2.2 below.

The purpose of this report is to provide an initial landscape-scale screening and site-level characterization of the proposed project to address the U.S. Fish and Wildlife Service's (USFWS's) *Land-Based Wind Energy Guidelines* (WEG; USFWS 2012) Tiers 1 and 2 (preliminary site evaluation and site characterization) and *Eagle Conservation Plan Guidance* (ECPG) (USFWS 2013) Stage 1 (site assessment), as well as the Arizona Game and Fish Department's (AGFD's) *Guidelines for Reducing Impacts to Wildlife from Wind Energy Development in Arizona* (AGFD 2012a) preliminary site screening objectives. This report answers the following questions, to the extent they can be answered at this stage, which are meant to 1) identify potential impacts to wildlife, and 2) categorize eagle risk at this stage:

- Are special-status species or their habitats (including designated critical habitat) present or likely to be present?
- Are plant communities of concern present or likely to be present?
- Are there high-priority conservation areas for non-governmental organizations, or other local, state, regional, federal, tribal, or international designations?
- Are there large areas of intact habitat with the potential for fragmentation, with respect to species of concern needing large contiguous blocks of habitat?
- Are their known critical areas of wildlife congregation or other areas of seasonal importance?
- Are there important eagle use areas or migration concentration sites present?
- How is the site categorized with respect to USFWS's ECPG site categorization criteria?

This report is being submitted after an initial wildlife agency coordination meeting, which was held on May 18, 2022. A Navajo County Special Use Permit (SUP) and an Arizona Corporation Commission (ACC) Certificate of Environmental Compatibility (CEC) will be pursued in the third and fourth quarters of 2022, with an SUP application anticipated to be delivered to Navajo County on June 23, 2022. Tier 3 (preconstruction wildlife surveys) are underway, initiated by a different developer from October 2019 through March 2020 and continued by AES from May 2020 through November 2021. These surveys will continue in 2023.

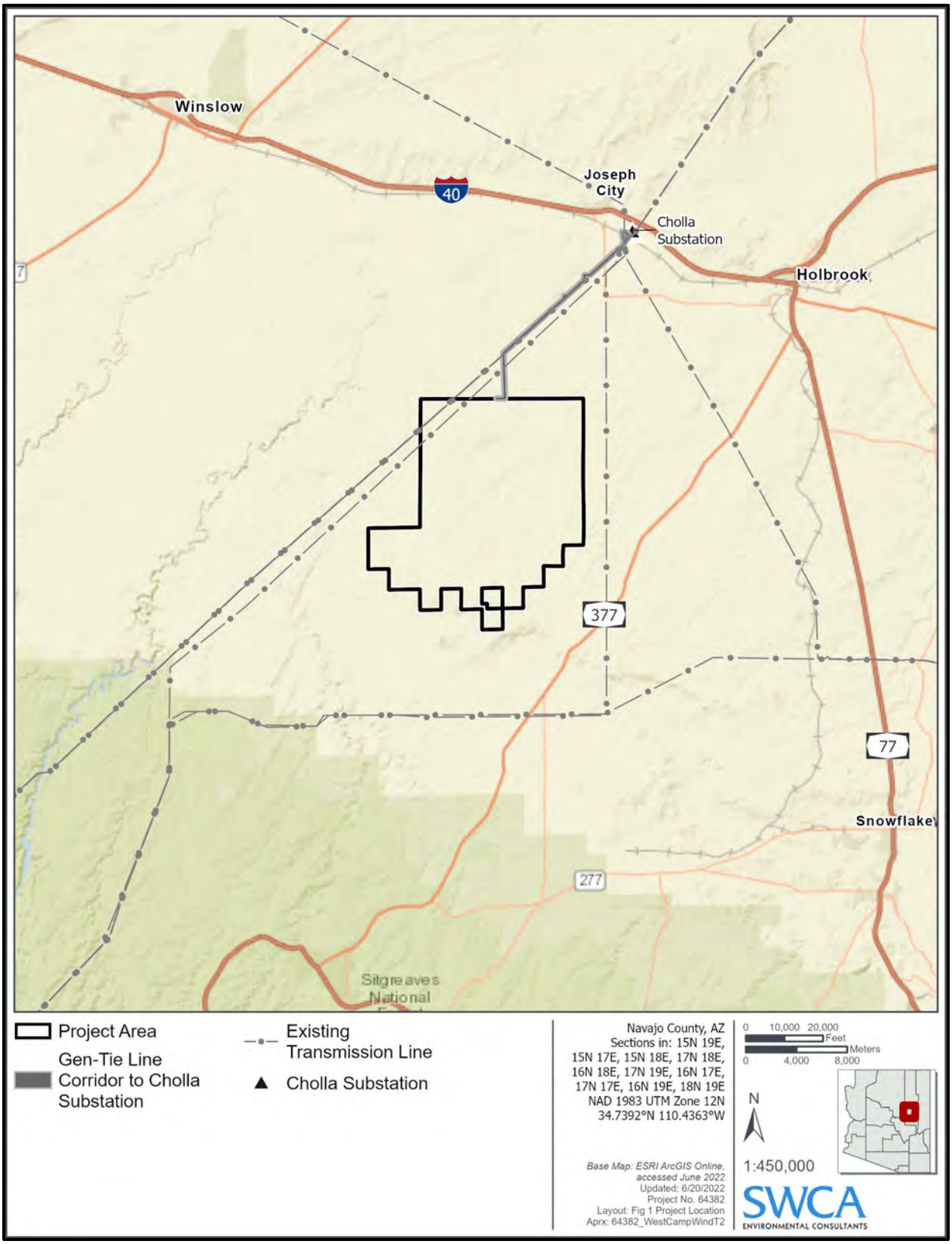

Figure 1. Project location.

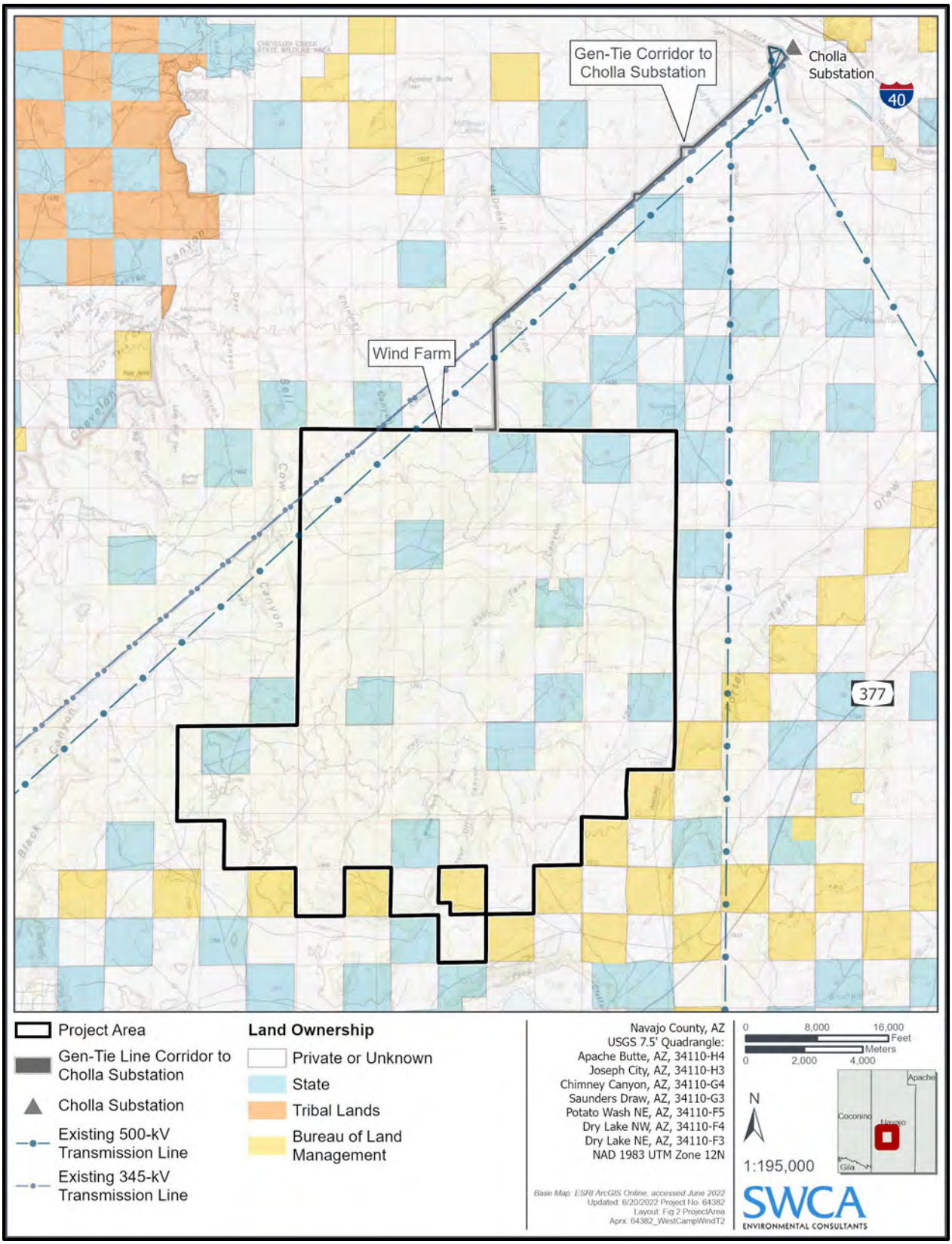

Figure 2. Project area and gen-tie detail.

Wind project impacts to wildlife are typically framed in the context of direct impacts resulting from bird and bat collisions with turbine blades, or other project infrastructure (towers, guy wires, or power lines), electrocution with power lines, and indirect impacts resulting from the effects of project construction and operation on a species' use of habitat (e.g., disturbance or displacement, habitat loss, habitat fragmentation, and hydrological impacts) (Allison et al. 2019; American Wind Wildlife Institute 2021; Avian Power Line Interaction Committee [APLIC] 2022a).

1.1 Applicable Regulations and Conservation Priorities

Applicable federal and state wildlife and plant laws regulating wind energy development in Arizona, as well as non-regulated special-status species, are described below.

1.1.1 *Federal*

1.1.1.1 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973, as amended (ESA), protects imperiled (threatened and endangered) species and their habitats, prohibiting anyone without a permit to "take" these species; permits are generally available for conservation and scientific purposes. Section 9 of the ESA makes it unlawful for any person—including private and public entities—to take individuals of an endangered animal species. These prohibitions have been extended, by regulation, to threatened species. *Take* is defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." *Harm* may include significant habitat modification or degradation that results in killing or injuring listed species by significantly impairing essential behavioral patterns. If a federal nexus, i.e., federal permit, federal funding, or any federal involvement, does not apply to a project, section 9 is the provision of the ESA that applies.

1.1.1.2 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act of 1918, as amended (MBTA), prohibits incidental "take" of migratory birds—more than 1,000 species (50 Code of Federal Regulations [CFR] 10 and 21)—their parts, eggs, or nests. *Take* is defined by the MBTA as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." An MBTA violation can result in fines and/or imprisonment; however, the USFWS focuses its enforcement resources on project proponents that fail to identify and implement appropriate and practicable mitigation measures that avoid bird injury or mortality.

Effective December 3, 2021, the USFWS revoked rules based on M-37050, which was permanently revoked and withdrawn in March 2021 by M-37065. The legal and regulatory interpretations of the MBTA are now aligned to prohibit incidental take, consistent with judicial precedent. Relevant to construction and operations activities, a permit is not required to destroy inactive migratory bird nests (i.e., those without viable eggs or nestlings), provided that no possession occurs, and no permit or other regulatory authorization is required (USFWS 2018; see Arizona Revised Statutes [ARS] 17-236 below).

1.1.1.3 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits anyone without a permit from "taking" eagles, their parts, eggs, or nests. *Take* is defined by the Eagle Act as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb;" the Eagle Act's definition of "take" differs from the ESA's definition in that it does not include habitat destruction or alteration, unless such damage "disturbs" an eagle. *Disturb* is defined as "to agitate or bother to a degree that causes, or is likely to cause,

based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior."

In 2009, the USFWS promulgated regulations that established two new permit types authorizing 1) purposeful take (removal, relocation, or destruction) of eagle nests under limited circumstances, and 2) incidental take. In 2016, the USFWS revised the regulations for eagle incidental take permits, allowing developers to obtain a 30-year permit subject to mitigation and monitoring, among other requirements. The 2016 rule also removed the distinction between standard (to address one-time effects from projects) and programmatic (to authorize recurring take from projects) permit types and modified the preservation standard definition: any authorized take must be "consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species."

1.1.1.4 BIRDS OF CONSERVATION CONCERN

USFWS Birds of Conservation Concern (BCC) are migratory and non-migratory bird species, beyond those designated as federally threatened or endangered, that represent USFWS's highest conservation priorities. The list does not govern "take," rather it is intended to proactively prevent or remove the need for additional ESA bird listings by promoting greater study and protection of the habitats and ecological communities upon which these species depend.

The USFWS updated its BCC list in 2021 (USFWS 2021).

1.1.2 *State*

Pursuant to ARS 17-102, wildlife is the property of the state and can be taken only as authorized by the Arizona Game and Fish Commission. Violations can result in criminal prosecution and/or civil liability. ARS 17-236 is described below; other state statutes and Commission policies pertinent to wind energy projects are described in AGFD (2012a).

1.1.2.1 STATE OF ARIZONA SPECIAL-STATUS SPECIES

The *Arizona State Wildlife Action Plan* (AGFD 2012b; SWAP) identifies Species of Greatest Conservation Need (SGCN): vertebrate, crustacean, and mollusk species that are indicative of the diversity and health of the state's wildlife, including low and declining populations, warranting heightened attention. AGFD (2012b) prioritized SGCN species into three tiers: 1A, 1B, and 1C. Tier 1A species are those for which AGFD has entered into an agreement or has legal or other contractual obligations or warrants the protection of a closed season. Tier 1B represents the remainder of the species meeting vulnerability criteria. Tier 1C species are those representing priority research and information needs due to their unknown status. Species identified as vulnerable (1A and 1B species) are evaluated in this report.

AGFD is currently working on a comprehensive revision of the 2012 plan, to be completed in 2022, which will include an updated SGCN list.

1.1.2.2 ARIZONA REVISED STATUTES 17-236

In Arizona, it is unlawful to "take or injure any bird or harass any bird upon its nest, or remove the nests or eggs of any bird, except as may occur in normal horticultural and agricultural practices and except as authorized by commission order" (ARS 17-236). The intention of the statute is to prohibit removal

of active nests, rather than inactive nests; a state permit is not required to remove an inactive nest (personal communication, Christina Kondrat-Smith, Permitting Specialist, AGFD, with Allen Graber, Ecologist, SWCA Environmental Consultants [SWCA], December 3, 2019; and personal communication, Kenneth "Tuk" Jacobson, Raptor Management Coordinator, AGFD, with Allen Graber, Ecologist, SWCA, January 28, 2021).

1.1.2.3 ARIZONA DEPARTMENT OF AGRICULTURE ARIZONA NATIVE PLANT LAW

The Arizona Native Plant Law (ARS 3-904) (ANPL) prohibits taking, transporting, or possessing protected plants from any lands without permission and a permit from the Arizona Department of Agriculture; it requires notification prior to land clearing (destruction) or removal. Protected plants are categorized as Highly Safeguarded, Salvage Restricted, Salvage Assessed, and Harvest Restricted.

1.1.2.4 ARIZONA DEPARTMENT OF AGRICULTURE NOXIOUS WEED REGULATIONS

The Arizona Department of Agriculture (Administrative Code R3-4-245) maintains a list of noxious weeds that may be controlled or quarantined to prevent further infestation or contamination, as well as those that are prohibited from entering the state. Noxious weeds are categorized as Class A, B, and C.

1.2 Applicable Guidelines

1.2.1 *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines*

The USFWS's WEG (USFWS 2012) are designed for utility-scale land-based wind energy projects to reduce potential impacts to species of concern at all stages of development. The WEG tiered approach provides a decision framework for collecting information in increasing detail to evaluate risk and make siting and operational decisions. It provides the opportunity for evaluation and decision-making at each tier, enabling a developer to abandon or proceed with project development, or to collect additional information if required. Tiers 1 and 2 provide an initial landscape-scale screening and site-level characterization that addresses potential risk a project would pose to species of concern and their habitats.

This tiered approach does not require that every tier, or every element within each tier, be implemented for every project. Instead, the tiered approach allows efficient use of developer and agency resources with increasing levels of effort until sufficient information and the desired precision is acquired for the risk assessment. Adherence to the WEG is voluntary and does not relieve any individual, company, or agency of the responsibility to comply with laws and regulations; however, if a violation occurs, USFWS will consider a developer's documented efforts to communicate with the USFWS and adhere to the WEG in its enforcement decision.

1.2.2 *U.S. Fish and Wildlife Service Eagle Conservation Plan Guidance*

The USFWS's ECPG (USFWS 2013) supplements the WEG tiered approach to inform whether a site will meet standards for issuance of an eagle take permit. Stage 1 provides an initial site assessment at broad-landscape and project scales to determine the spatial, temporal, and type of eagle use of the site. The staged process is used to identify avoidance and minimization measures to reduce eagle disturbance

and potential mortality. Neither the WEG nor the ECPG confers the take authorization necessary to shield an entity from enforcement for prohibited take under the Eagle Act.

1.2.3 *Arizona Wind Energy Development Guidelines*

AGFD's (2012a) guidelines are meant to assist energy developers in identifying potential impacts to wildlife and wildlife habitats and measures to avoid, minimize, and mitigate for those impacts. Like the WEG and ECPG, adherence to the state guidelines is voluntary and does not absolve individuals and entities from liability for violating state law; however, AGFD will take compliance with these guidelines into consideration when considering law enforcement action. AGFD (2012a) encourages project proponents to coordinate with their Project Evaluation Program staff throughout the tiered process. As part of the early site screening, they encourage a site reconnaissance survey to obtain information on the vegetative communities and significant topographic features to help determine the wildlife community using the site.

1.2.4 *Avian Power Line Interaction Committee Guidance*

The APLIC has developed guidance documents identifying avian-safe power line construction and design practices. Guidance documents include *Avian Protection Plan Guidelines* (developed in conjunction with the USFWS; APLIC 2005), *Suggested Practices for Avian Protection of Power Lines: State of the Art in 2006* (APLIC 2006), *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012), and *Recommendations for Power Pole Configurations at Wind Energy Projects* (APLIC 2022b). Key avian-safe design elements identified by APLIC include installing line-marking devices (also known as diverters) in collision risk areas, removing ground wires, spacing energized and grounded parts appropriately, and capping energized parts.

2 METHODS

2.1 Approach

As described in the WEG, Tier 1 questions may be addressed by desktop evaluation alone or Tiers 1 and 2 questions may be combined to adequately evaluate these questions after one or repeated site visits. In both approaches, the developer evaluates potential risk to species of concern and their habitats related to multiple possible sites or a single site within a landscape context. Combining the Tier 2 evaluation with that of Tier 1 provides a preliminary assessment of site-specific information. In this document, a single site is evaluated using the Tiers 1 and 2 combined approach. ECPG Stage 1 and AGFD's (2012a) preliminary site screening questions have also been incorporated in our evaluation.

2.2 Landscape Scales Considered

In this document, we consider the presence of natural resources (e.g., critical habitats and special designations, eagle breeding areas, wildlife corridors) within broad landscape and project scales defined by the USFWS and AGFD. Generally, the area within 10 miles of the project area and within 3 miles of the gen-tie is evaluated for consistency with AGFD's Environmental Online Review Tool reports (AGFD 2022a, 2022b). Where relevant, we consider specific resources in the context of the larger region. For example, specific to potential species' occurrence determinations, the habitat conditions within the project area and gen-tie are considered; nearest records of these species within the region are presented when known. Relevant landscape scales, considered herein, are defined as follows:

Project area (site): the 52,500-acre project area, inclusive of the gen-tie line within the project area. The gen-tie line exterior to the project area is treated separately from the term "project area" (see definition below). The ECPG defines project area in the context of eagle impact considerations as the area that includes the project footprint and contiguous land that shares relevant characteristics. To distinguish these terms in this document, the ECPG term "project area" is referred to as the project's *eagle nesting population area*.

Gen-tie: Gen-tie refers to the gen-tie line exterior to the project area. The 150-foot-wide gen-tie corridor is approximately 225 acres and consists of only private lands.

Project footprint: defined by the ECPG, the minimum-convex polygon that encompasses the turbines and any associated infrastructure, roads, etc., within the project area, excluding the gen-tie located outside of the project area. This area is applicable when considering ECPG's risk categorization for a site. The project footprint is not currently known.

Nesting eagle ranging behavior (2-mile buffered project boundary): USFWS (2020a), citing eagle ranging behavior around nests, suggests that those eagle nesting pairs within 2 miles of a project may be subject to disturbance or lethal take.

10-mile buffered project area: AGFD's Environmental Online Review Tool (AGFD 2022a, 2022c) screens special-status species and special areas (e.g., critical habitats, Important Connectivity Zones [ICZs], Important Bird Areas [IBAs]) within 10 miles of a wind energy project site.

3-mile buffered gen-tie: AGFD's Environmental Online Review Tool (AGFD 2022b, 2022c) screens special-status species and special areas within 3 miles of a power line. The 3-mile buffer query used for this report covers the gen-tie line external to the project area. Internal gen-tie corridors are captured through the 10-mile buffered project area query.

Region: The term "region" is used broadly in this report to describe the area surrounding the project area, or nearest occurrence of a species, but generally matches USFWS's (2022a) official project-specific species and critical habitats list evaluation area: the U.S. Geological Survey (USGS) 7.5-minute quadrangle(s) which intersect(s) with the project area; each quadrangle covers, at a minimum, 49 square miles.

2.3 Potential for Occurrence of Special-Status Species and Their Habitats

This document evaluates potential for occurrence of 1) federally protected (endangered and threatened) species and their critical habitats (USFWS 2022a, 2022b), 2) both Eagle Act–protected species, 3) State SGCN 1A and 1B species (AGFD 2012b, 2022a, 2022b), and 4) BCCs for Bird Conservation Region (BCR) 16 (USFWS 2021). The potential for occurrence of each species is based on 1) documented records, 2) existing information on distribution, and 3) qualitative comparisons of the habitat requirements of each species with the vegetation communities or landscape features present in the project area or gen-tie.

Potential for occurrence categories are as follows:

- *Known to occur*—the species has been documented in the project area or gen-tie by a reliable observer.

- *May occur*—the project area or gen-tie is within the species' currently known range, and vegetation communities, soils, or other habitat conditions resemble those known to be used by the species.
- *Unlikely to occur*—the project area or gen-tie is within the species' currently known range, but vegetation communities, soils, or other habitat conditions do not resemble those known to be used by the species, or the project area and gen-tie is clearly outside the species' currently known range.

As part of this effort, SWCA requested and obtained the following:

- An official project-specific species and critical habitats list via the USFWS Information for Planning and Consultation (IPaC) system (USFWS 2022a; Appendix A).
- Separate project-specific Arizona Environmental Online Review Tool reports for the project area and gen-tie (AGFD 2022a, 2022b; Appendix B).[1]

The following resources were also reviewed to describe the general site characteristics, soils, vegetation, and aquatic resources as they pertain to potential for occurrence of the relevant species:

- *Biotic Communities of the Southwest* (Brown and Lowe 1982).
- National Wetlands Inventory (USFWS 2022c).
- Natural Resources Conservation Service (NRCS) Web Soil Survey data (NRCS 2019).
- Southwest Regional Gap Analysis Project (SWReGAP) data (USGS 2016).

2.4 Data Sources Reviewed

In addition to those resources described above, SWCA coordinated with AGFD who provided general areas (4 × 4–mile blocks) and associated past occupancy/activity[2] data for known, historic, and possible eagle breeding areas/territories[3] that have been identified during past survey efforts within 5 miles of the project area (personal communication, Andrew Cavalcant, former Project Evaluation Specialist, AGFD, with Allen Graber, Ecologist, SWCA, January 19, 2021). As part of this coordination, SWCA also requested any information on bats (i.e., general use of the area, presence of nearby bat colonies) that could be shared but did not receive additional information at that time.

Additionally, during the initial coordination meeting held on May 18, 2022, AGFD and USFWS provided some initial insight on wildlife issues to consider for the project. Some concerns that were raised included potential impacts to pronghorn (*Antilocapra americana*) fawning during construction, and collision risk to high-flying bats (e.g., big-free tailed bats [*Nyctinomops macrotis*], greater bonneted bats [*Eumops perotis*]). These topics are reviewed below (see Sections 3.3.2.5 and 3.3.2.1).

The following data sources were also reviewed:

- Arizona's Wildlife Linkages Assessment (Arizona Wildlife Linkages Workgroup [AWLW] 2006)

[1] The *Arizona Environmental Online Review Tool* reports summarized special-status species and special areas within 10 miles of the wind farm project area (AGFD 2022a) and within 3 miles of the gen-tie (AGFD 2022b).

[2] An *active* nest is one in which an egg or eggs are laid and/or young are raised (Driscoll 2010; Postupalsky 1974).

[3] A *territory or breeding area* is an area that contains, or historically contained, one or more nests within the home range of a mated pair: a confined locality where nests are found, usually in successive years, and where no more than one pair is known to have bred at any one time (Steenhof and Newton 2007). The number of unique territories in a given area can be refined over multiple years of survey and may vary from year to year.

- AGFD's Online Environmental Review Tool map (AGFD 2022c) which provides landscape-level spatial data, such as wildlife corridors, unfragmented areas, wilderness areas, wildlife waters, and special-status species range models, for purposes of land use and conservation planning
- AGFD's (2012b) *Arizona State Wildlife Action Plan: 2012–2022*
- Audubon's Important Bird Areas (IBAs) (Audubon 2022)
- Bureau of Land Management (BLM) Areas of Critical Environmental Concern (BLM 1988, 1989)
- eBird and Birds of the World's bird species' range maps (eBird 2022a, Billerman et. al. 2022)
- eBird bird migration hotspots (eBird 2022b)
- National Trails (National Park Service 2022)
- National Wildlife Refuges (USFWS 2022d)
- Species-specific migration corridors (e.g., sandhill crane flyways) (Pacific Flyway Council 2022)
- State parks (Arizona State Parks 2022)
- USFWS critical habitats (USFWS 2022e)
- Western Association of Fish and Wildlife Agencies' (WAFWA) Crucial Habitat Assessment Tool (CHAT) (WAFWA 2020)
- Western Hemisphere Shorebird Reserve Network (WHSRN) sites (WHSRN 2019)
- Wetlands of International Importance (Ramsar 2014)
- Wild and Scenic Rivers (National Wild and Scenic Rivers System 2022).

2.5 Site Reconnaissance

Two SWCA biologists with expertise in the ecology of the regional wildlife community conducted a reconnaissance visit to the project area on January 27, 2022. The objective of the visit was to "ground-truth" available desktop information to effectively evaluate habitat associations and wildlife site characterization objectives.

Tier 3 preconstruction wildlife surveys have also been conducted and are ongoing within the project area, which has provided a comprehensive familiarity with the site's wildlife habitat conditions. This has included 2 full years of avian use surveys conducted monthly at fixed points distributed throughout the project area from October 2019 through September 2021, raptor nest surveys within 2 miles of the project area in February and March 2021, and bat acoustic surveys at fixed stations from March through November 2021, at which avian surveyors maintained the bat acoustic units monthly. Since these surveys began, surveyors have been recording incidental data contributing to our overall understanding of wildlife use of the site. Surveyors have been specially instructed to record incidental eagle flight paths and perch locations, special-status species or their suitable habitats/prey items, bird nests, bird concentrations (i.e., flocks, migration events, waterfowl use of the site's water features), and a running list of bird species seen and heard.

2.6 Eagle Risk Categorization

The ECPG defines eagle risk category (Category 1: high–Category 3: minimal) criteria for a proposed project site as follows:

Category 1: High risk to eagles, potential to avoid or mitigate impacts is low.

- Has an important eagle-use area or migration concentration site within the project footprint; or
- has an annual eagle fatality estimate (mean estimate) greater than 5% of the estimated local area population (LAP) size; or
- causes the cumulative mortality for the LAP to exceed 5% of the estimate LAP size.

Category 2: High or moderate risk to eagle, opportunity to mitigate impacts.

- Has an important eagle-use area or migration concentration site within the project area nesting population area (i.e., within 10 miles of the project area) but not in the project footprint; or
- has an annual eagle fatality estimate between 0.03 eagle per year and 5% of the estimated LAP size; or
- causes cumulative annual mortality of the LAP of less than 5% of the estimated LAP size.

Category 3: Minimal risk to eagles.

- Has no important eagle-use areas or migration concentration sites within the project area nesting population area; and
- has an annual eagle fatality estimate less than 0.03; and
- causes cumulative annual mortality of the LAP of less than 5% of the estimated LAP size.

Because assigning a category to a site is determined through an iterative process, beyond the initial site characterization, incorporating ECPG Stages 2 through 4 site-specific survey data and assessments, site categorization at this stage (Stage 1) is preliminary. The Stage 1 site assessment may inform a decision on whether to invest in Stage 2 (WEG Tier 3) surveys and/or the level of survey effort warranted; in this case, surveys have already been initiated.

2.7 Arizona Game and Fish Department's Framework for Determining Bat and Bird Study Effort

AGFD (2012a) recommends categorizing (Category 1: low–Category 4: significant) a site based on criteria used to inform anticipated impacts to wildlife as follows:

Category 1: Sites with low potential for wildlife impacts as informed by sufficiently studied nearby wind energy projects for which little uncertainty as to the low-impact level exists. For such sites, AGFD recommends 1 year of preconstruction surveys focusing on information gaps and particular species of concern.

Category 2: Sites for which information from nearby sites indicates low potential for wildlife impacts and the initial site screening indicates there are no potential issues. For these sites, AGFD recommends a minimum of 1 year of preconstruction surveys.

Category 3: Sites with high levels of bird and bat use, presence of special-status species, or considerable uncertainty regarding potential impacts. For these sites, AGFD recommends a minimum of 2 years of preconstruction surveys. Example habitats include the following:

- High prey abundance such as prairie dog colonies
- Known avian migration stopovers such as water bodies
- Bat foraging attractants such as edge habitats important for certain commuting or foraging bats
- High concentrations of migrating, wintering, or breeding raptors.

Category 4: Sites for which potential to avoid or mitigate impacts is low or those proposed within special designation areas (e.g., wilderness areas, national parks or monuments, state parks, regional parks, and wildlife or nature preserves), riparian corridors, and areas of significant topographic relief. For these sites, AGFD recommends a minimum of 3 years of preconstruction survey data indicating that suspected impacts to wildlife populations are not significant.

3 RESULTS

3.1 Potential for Occurrence of Special-Status Species and Their Habitats

3.1.1 *Environmental Setting*

The project area and gen-tie, characterized by flat to rolling terrain at elevations between 5,000 and 6,100 feet (1,500 and 1,860 m), are within the Arizona/New Mexico Plateau ecoregion (U.S. Environmental Protection Agency 2011). The project is within the Grand Canyon physiographic section, the highest part of the Colorado Plateau province (Fenneman and Johnson 1946). Notable landforms in the project's vicinity include the Pink Cliffs, Dry Lake, Chevelon Canyon, and the Little Colorado River located 0.5 mile south of the project area (5 miles southeast of the gen-tie), 1.5 miles south of the project area (6 miles southeast of the gen-tie), 4 miles northwest of the project area (and gen-tie), and 9 miles north of the project area (bisecting the northern extreme of the gen-tie), respectively.

Few shallow canyons are present within and proximal to the site including Lost Tank (see Appendix C, Photograph C-11) and Pour Off Canyons located within the project area, Bell Cow Canyon, 0.75 mile to the west, Porter Tank Draw, 1.5 miles to the east, Chimney Canyon, just north of the project area, and McDonald Canyon, 2 miles to the north. Chimney Canyon and McDonald Canyon bisect the gen-tie. Several small sinkholes arranged in a series of gentle rings, an extension of the McCauley Sinks to the northwest, are present in the southwestern portion of the project area (see Appendix C, Photograph C-1).

Land uses include cattle ranching/grazing and hunting. The nearest residence to the project area is 0.5 mile to the west, beyond which rural residences are sparsely distributed. The Cholla coal-fired power plant and Cholla Substation are located 10 miles northeast of the project area. Initial access to the site is via U.S. Highway 40 to Obed Road from the north and, from the east: State Route 377 to Hutch Road (see Figure 1). Established county and two-track roads provide additional access within the site.

3.1.2 *Land/Vegetation Cover*

Appendix C includes representative photographs of the project area vegetation communities.

The project area and gen-tie are primarily within the Plains and Great Basin Grassland biotic community (Brown 1994). The southern portion of the project area and northern terminus of the gen-tie are also within the Great Basin Conifer Woodland and Great Basin Desertscrub communities, respectively (Brown 1994). The majority (53%) of the project area is mapped by USGS (2016) as Inter-Mountain Basins (IMB) Semi-Desert Grassland (27%) and Colorado Plateau Pinyon-Juniper Woodland (26%), followed by IMB Juniper Savanna (18%), IMB Semi-Desert Shrub Steppe (14%), and Colorado Plateau Mixed Low Sagebrush Shrubland (11%) (Table 1, Figure 3). Eight additional land/vegetation cover types are mapped in the project area by USGS (2016) (see Table 1; see Figure 3), of which one (Invasive Southwest Riparian Woodland and Shrubland (<0.1%) appears to have been mapped in error based on our review of Google Earth imagery.

The gen-tie is mapped by USGS (2016) as IMB Semi-Desert Grassland (53%), IMB Mixed Salt Desert Scrub (18%), IMB Semi-Desert Shrub Steppe (12%), IMB Greasewood Flat (8%), and seven lesser land/vegetation cover components (Table 1, Figure 3).

Table 1. SWReGAP Land/Vegetation Cover Types within the Project Area

Land/Vegetation Cover Type	Acres (%)
IMB Semi-Desert Grassland	13,957.9 (26.6)
Colorado Plateau Pinyon-Juniper Woodland	13,825.7 (26.3)
IMB Juniper Savanna	9,594.1 (18.3)
IMB Semi-Desert Shrub Steppe	7,285.9 (13.9)
Colorado Plateau Mixed Low Sagebrush Shrubland	5,581.6 (10.6)
IMB Greasewood Flat	1,351.6 (2.6)
Colorado Plateau Blackbrush-Mormon-tea Shrubland	557.3 (1.1)
Colorado Plateau Mixed Bedrock Canyon and Tableland	165.3 (0.3)
Southern Colorado Plateau Sand Shrubland	123.4 (0.2)
IMB Mixed Salt Desert Scrub	73.6 (0.1)
IMB Big Sagebrush Shrubland	10.5 (<0.1)
IMB Shale Badland	1.3 (<0.1)
Invasive Southwest Riparian Woodland and Shrubland	1.1 (<0.1)

Source: USGS (2016) GAP data.

Table 2. SWReGAP Land/Vegetation Cover Types within the Gen-Tie

Land/Vegetation Cover Type	Acres (%)
IMB Semi-Desert Grassland	119.1 (53.0)
IMB Mixed Salt Desert Scrub	40.6 (18.1)
IMB Semi-Desert Shrub Steppe	26.4 (11.8)
IMB Greasewood Flat	17.3 (7.7)
Invasive Southwest Riparian Woodland and Shrubland	9.7 (4.3)
Southern Colorado Plateau Sand Shrubland	6.7 (3.0)
Colorado Plateau Mixed Bedrock Canyon and Tableland	1.6 (0.7)
IMB Big Sagebrush Shrubland	1.3 (0.6)
Colorado Plateau Pinyon-Juniper Woodland	0.8 (0.4)

Rocky Mountain Lower Montane Riparian Woodland and Shrubland	0.7 (0.3)
Colorado Plateau Blackbrush-Mormon-tea Shrubland	0.3 (0.2)

Source: USGS (2016) GAP data.

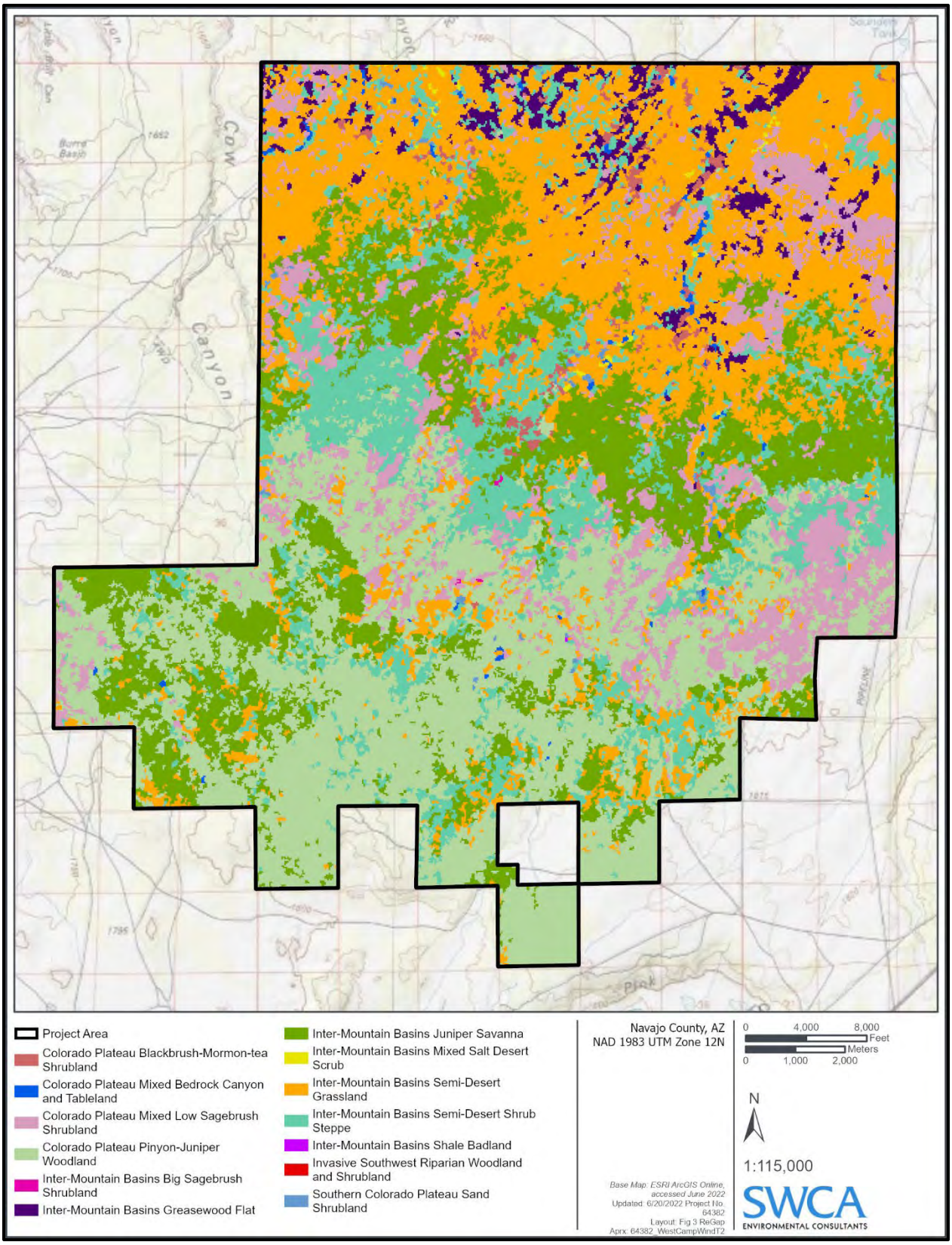

Figure 3. Land/vegetation cover within the project area.

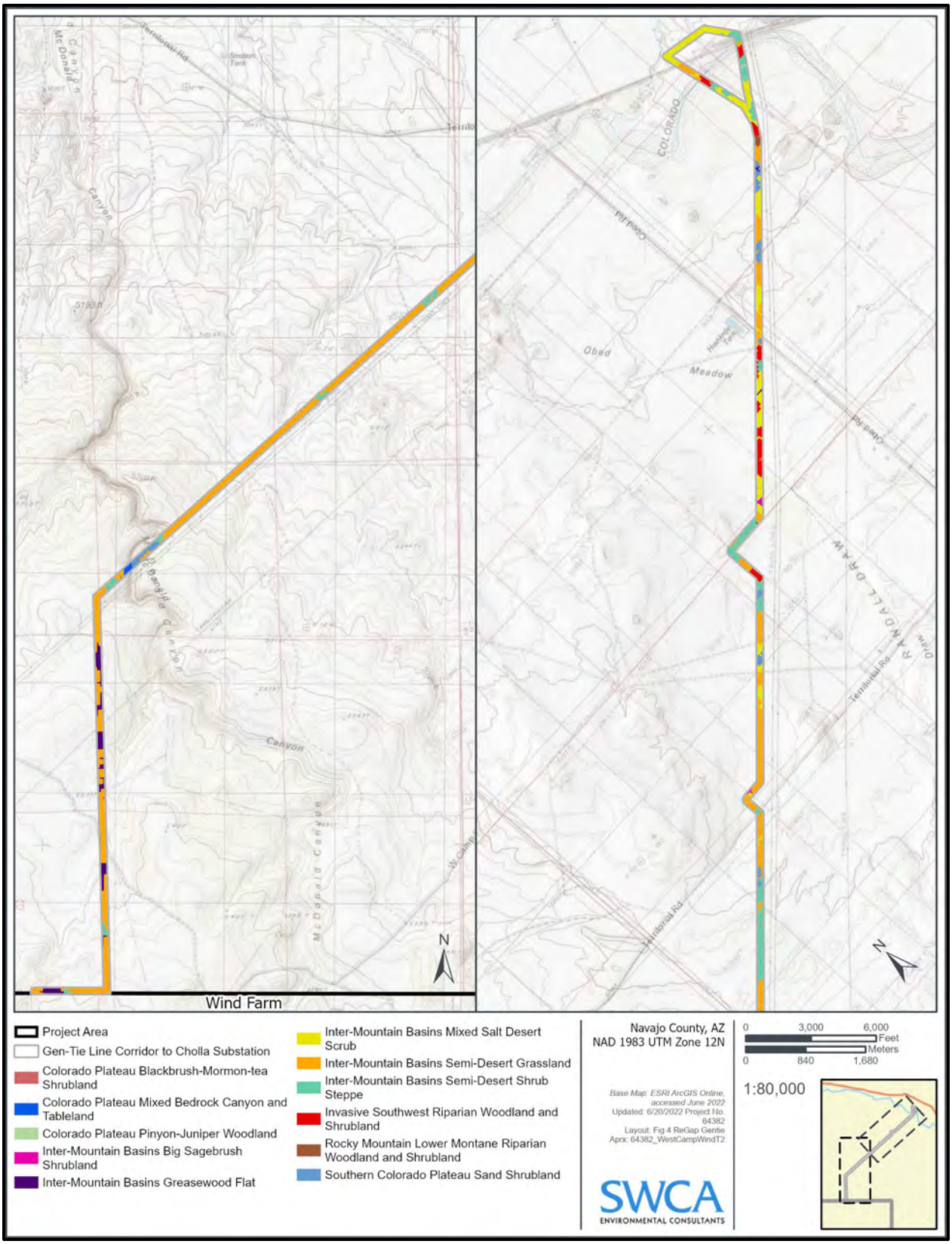

Figure 4. Land/vegetation cover within the gen-tie.

As observed during the January 27, 2022, reconnaissance survey, the project area vegetation is generally characterized as juniper savanna dominated by perennial bunchgrasses and forbs and scattered to locally dense shrub and tree layer. The southeastern portion of the project area is characterized as shortgrass grassland and shrub-steppe (without the pinyon and juniper component). Denser patches of pinyon-juniper woodlands exist in the central and northeastern portions of the project area. Although the site reconnaissance focused on the project area rather than the gen-tie, based on our review of Google Earth imagery and the USGS (2016) mapped layers, the gen-tie, where it extends north of the project area, transitions south to north from pinyon-juniper savanna to sparsely vegetated shortgrass grassland and shrub-steppe. Where the gen-tie would span the Little Colorado River, the riparian habitat appears to consist of patchy tamarisk (*Tamarix* sp.).

Characteristic project area grasses include blue grama (*Bouteloua gracilis*), mesa dropseed (*Sporobolus flexuosus*), sand dropseed (*Sporobolus cryptandrus*), sideoats grama *(Bouteloua curtipendula*), spike dropseed (*Sporobolus contractus)*, and ring muhly (*Muhlenbergia torreyi*). Scattered to locally dense shrubs and subshrubs include Bigelow sage (*Artemisia bigelovii*), fourwing saltbush (*Atriplex canescens*), Fremont's mahonia (*Mahonia fremontii*), globemallow (*Sphaeralcea* spp.), jointfir *(Ephedra* spp.), one-seed juniper (*Juniperus monosperma*), snakeweed (*Gutierrezia* sp.), Stansbury cliffrose (*Purshia stansburiana*), Whipple cholla (*Cylindropuntia whipplei*), and winterfat (*Krascheninnikovia lanata*). The tree layer, where present, includes one-seed juniper and pinyon pine (*Pinus edulis*). One ponderosa pine (*Pinus ponderosa*) was observed in the southeastern portion of the project area (adjacent to Cement Tank). Signs of pinyon and juniper mechanical mastication and chemical treatments were noted during the site visit, particularly in the southwestern portion of the project area (see Appendix C, Photograph C-3).

Other plant species observed within the project area include Abert's creeping zinnia (*Sanvitalia abertii*), alderleaf mountain mahogany (*Cercocarpus montanus),* banana yucca (*Yucca baccata*), beardlip penstemon (*Penstemon barbatus*), brickelbush (*Brickellia* sp.), broadleaf milkweed (*Asclepias latifolia*), canyon grape (*Vitis arizonica*), crispleaf buckwheat (*Eriogonum corymbosum*), grama-grass cactus (also referred to as paperspine fishhook cactus; *Sclerocactus papyracanthus*), hairy false goldenaster (*Heterotheca villosa*), Indian ricegrass (*Achnatherum hymenoides*), kingcup cactus (*Echinocereus triglochidiatus*), narrowleaf yucca (*Yucca angustissima*), nightshade (*Solanum* sp.), plains pricklypear (*Opuntia polyacantha*), prairie spiderwort (*Tradescantia occidentalis*), Russian thistle (*Salsola tragus*), sacred thorn-apple (*Datura wrightii*), tulip pricklypear (*Opuntia phaeacantha*), prickly Russian thistle (*Salsola tragus*), shaggy dwarf morning-glory (*Evolvulus nuttallianus*), threadleaf ragwort (*Senecio flaccidus*), and Yavapai County buckwheat (*Eriogonum pulchrum*).

3.1.3 *Soils*

Sixteen soil map units are mapped within the project area (Table 3, Figure 5). Soil components forming these units are mostly classified as well drained, with one being classified as excessively drained; they do not meet hydric criteria (NRCS 2019). Parent material of these soils include alluvium derived from basalt, limestone, sandstone, siltstone, and/or mudstone; mixed alluvium derived from volcanic and sedimentary rock; eolian deposits; or eolian sands derived from sandstone or over alluvium derived from sandstone (NRCS 2019).

Eleven soil map units are mapped within the gen-tie area (Table 4, Figure 6). Soil components forming these units are mostly classified as well drained, with one being classified as excessively drained and three poorly or somewhat poorly drained. Medisaprists, saline is the only soil with a hydric rating (NRCS 2019). Parent material of these soils include organic material and/or alluvium derived from limestone, mudstone, sandstone, and/or siltsone; mixed alluvium derived from volcanic and sedimentary rock; eolian

sands derived from sandstone; or gypsiferous eolian sands and/or gypsiferous alluvium derived from mudstone and/or sandstone (NRCS 2019).

No pink-red Navajo sandstone vertical cliffs (Navajo sedge [*Carex specuicola*] habitat requirement); or active, unvegetated sand dunes derived from Navajo sandstone (Welsh's milkweed [*Asclepias welshii*] habitat requirement) are present within or proximal to the project (see Section 3.1.5; the project area and gen-tie are also outside of the geographic ranges of these species). No soils that formed in mixed alluvium belonging to the Gypsiorthids-Torriorthents Association (Peebles Navajo cactus [*Pediocactus peeblesianus* var. *peeblesianus*] habitat requirement) are present within the project area or gen-tie (but see Section 3.1.5).

Table 3. Soil Units within the Project Area

Soil Unit	Acres (%)
Pensom-Chedeski complex, 1–5% slopes	16,506.0 (31.4)
Leanto-Bisoodi complex, 1–12% slopes	11,945.8 (22.7)
Mellenthin-Rock outcrop complex, 1–20% slopes	7,243.0 (13.8)
Rock outcrop-Arches complex, 2–30% slopes	5,203.9 (9.9)
Rock outcrop-Needle complex, 1–10% slopes	3873.0 (7.4)
Bisoodi fine sandy loam, 1–8% slopes	2,612.4 (5.0)
Epikom channery sandy loam, 1–12% slopes	2,463.8 (4.7)
Kech fine sandy loam, 1–12% slopes	864.5 (1.6)
Kech-Rock outcrop complex, 1–20% slopes	801.1 (1.5)
Leanto-Bisoodi-Rock outcrop complex, 1–20% slopes	406.5 (0.8)
Tours clay loam, 1–3% slopes	168.8 (0.3)
Radnik silt loam, 0–3% slopes	141.1 (0.3)
Cerrillos-Ubank complex, 1–8% slopes	114.2 (0.2)
Nuffel silt loam, 0–3% slopes	101.7 (0.2)
Cerrillos sandy loam, 1–10% slopes	69.6 (0.1)
Barx fine sandy loam, 3–10% slopes	13.9 (<0.1)

Source: NRCS (2019) soil unit data.

Table 4. Soil Units within the Gen-Tie

Soil Unit	Acres (%)
Purgatory fine sandy loam, 1–8% slopes	45.2 (20.1)
Rock outcrop-Needle complex, 1–10% slopes	44.3 (19.8)
Epikom channery sandy loam, 1–12% slopes	42.4 (18.9)
Navajo silty clay, saline-sodic, 0–1% slopes	23.3 (10.4)
Ives fine sandy loam, wet, 0–1% slopes	16.6 (7.4)
Bisoodi fine sandy loam, 1–8% slopes	15.6 (7.0)
Medisaprists, saline, 0–1% slopes	10.3 (4.6)
Jocity sandy clay loam, saline-sodic, 0–1% slopes	8.6 (3.8)
Tours silty clay loam, saline-sodic, 0–1% slopes	7.9 (3.5)

Soil Unit	Acres (%)
Tours clay loam, 1–3% slopes	7.8 (3.5)
Riverwash-Typic Torrifluvents complex, 0–5% slopes	2.3 (1.0)

Source: NRCS (2019) soil unit data.

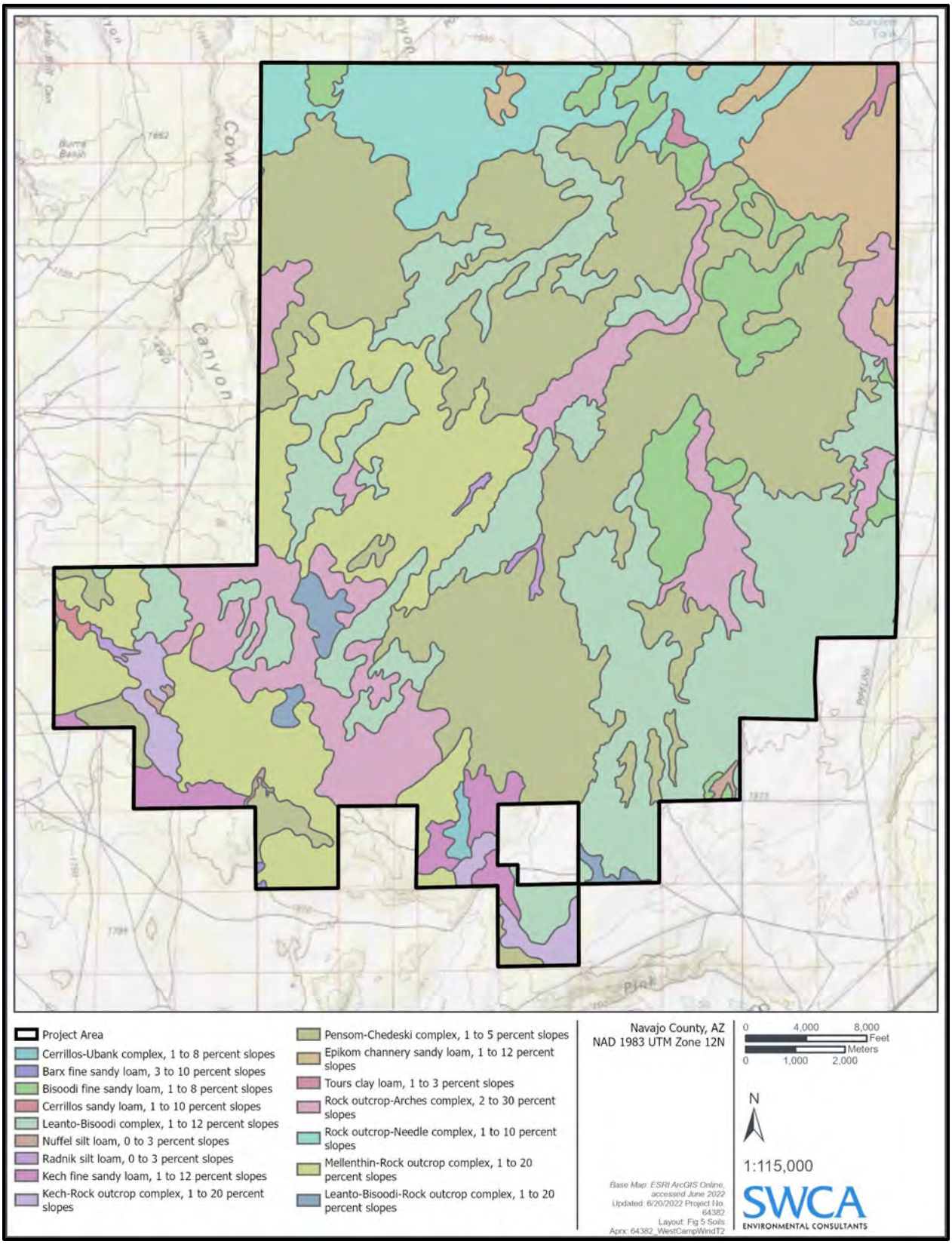

Figure 5. NRCS-mapped soil units within the project area.

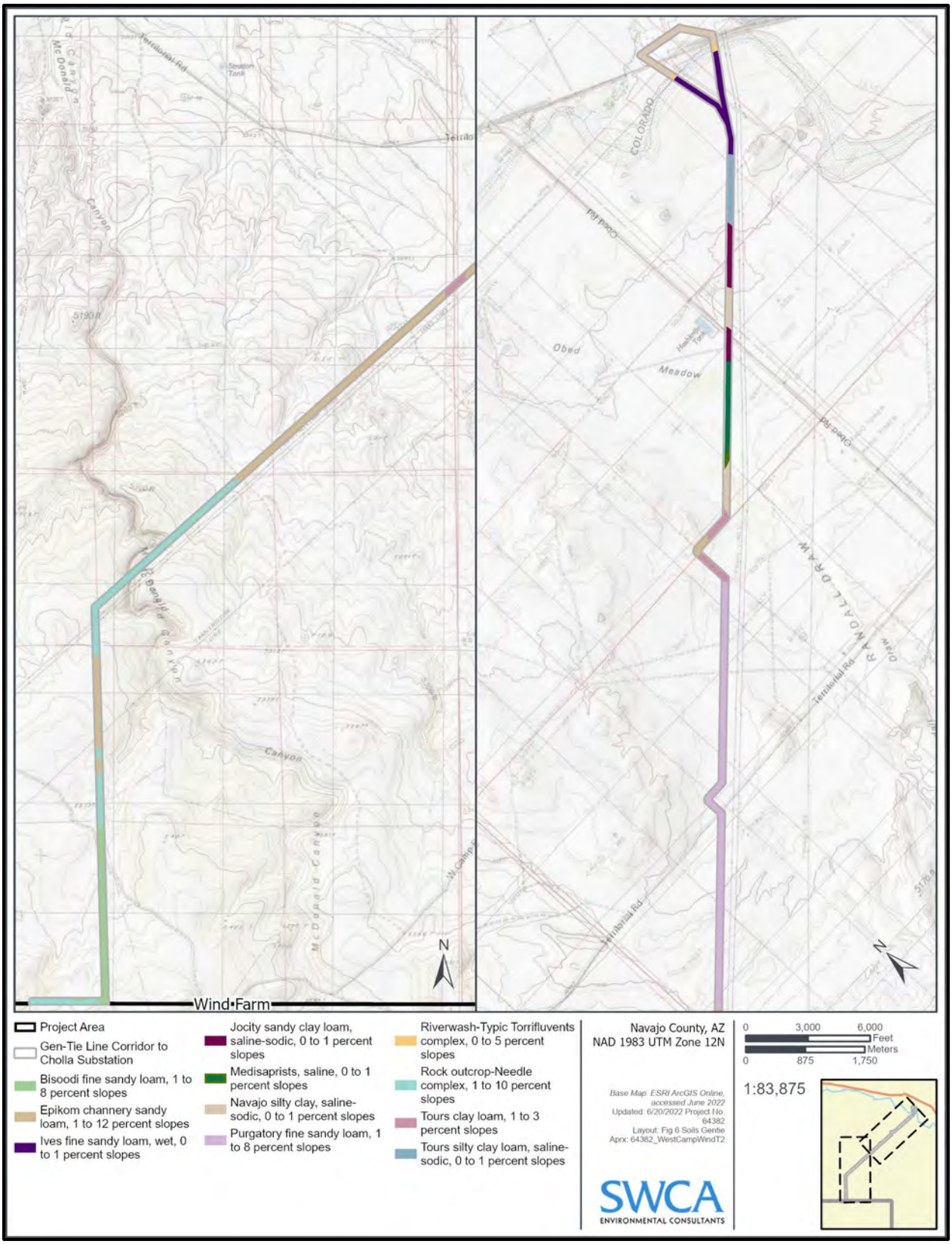

Figure 6. NRCS-mapped soil units within the gen-tie.

3.1.4 *Wetlands/Riparian Areas*

The Little Colorado River bisects the northern terminus of the gen-tie. Other notable water features in proximity to the project include Dry Lake (south of the project area) and Chevelon Creek (northwest of the project area and gen-tie) (see Section 3.1.1 for distances of these features from the project area and gen-tie). Silver Creek is approximately 15 miles to the east. The general flow pattern across the project area and gen-tie is south to north toward the Little Colorado River.

Wetlands within the project area and gen-tie (Figure 7) include ephemeral stock tanks and drainages (e.g., Lost Tank Canyon and Pour Off Canyon). Table 5 presents the acreages by National Wetlands Inventory (NWI)-mapped feature type within the project area and gen-tie. The National Wetlands Inventory (USFWS 2022c) classifies the stock tanks as "freshwater ponds: temporarily or intermittently flooded impoundments" (e.g., Cement Tank and Big Oil Well Tank, Figure 8). During site reconnaissance, SWCA noted that the project area stock tanks lack shrub/tree riparian vegetation and all but one (Cement Tank; see Appendix C, Photograph C-9) lacks emergent wetland vegetation. Cement Tank, on the southeast side of the project area, formed by a cement revetment damming a shallow, narrow canyon that flows intermittently, contains senescent rushes (*Juncus* spp.) (as observed during the January 2022 site visit). Drainages in the project area and gen-tie are classified as "riverine: intermittently, seasonally, or permanently flooded" (USFWS 2022c; Table 5, Figure 7). The R5UBH NWI features within the project area is mapped as "unknown perennial"; however, no perennial surface water features or sources (such as springs or seeps) have been observed in the project area during preconstruction wildlife surveys (October 2019–November 2021) or during the January 27, 2022 site reconnaissance. The R5UBH NWI features are associated with the inlets and outlets of the livestock tanks in the study area, including White Tank, Lower Bigler Tank, Red Tank, and others.

The Little Colorado River, where the gen-tie would span the river, is ephemeral with limited riparian habitats (sparse tamarisk).

Table 3. National Wetlands Inventory Features within the Project Area and Gen-Tie

NWI Code	Description	Acres in Project Area (%)	Acres in Gen-Tie (%)
Freshwater Pond			
PUSAh	Palustrine, unconsolidated shore, temporarily flooded, diked/impounded	1.3 (0.4)	0.2 (2.9)
PUSAx	Palustrine, unconsolidated shore, temporarily flooded, excavated	0.4 (0.1)	--
PUSJh	Palustrine, unconsolidated shore, intermittently flooded, diked/impounded	7.1 (2.2)	--
Riverine			
R4SBA	Riverine, intermittent, streambed, temporarily flooded	2.2 (0.7)	2.2 (32.8)
R4SBC	Riverine, intermittent, streambed, seasonally flooded	236.8 (76.4)	3.4 (50.7)
R4SBJ	Riverine, intermittent, streambed, intermittently flooded	63.7 (20.5)	0.9 (13.4)
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded	0.8 (0.2)	--

Source: USFWS (2022c).

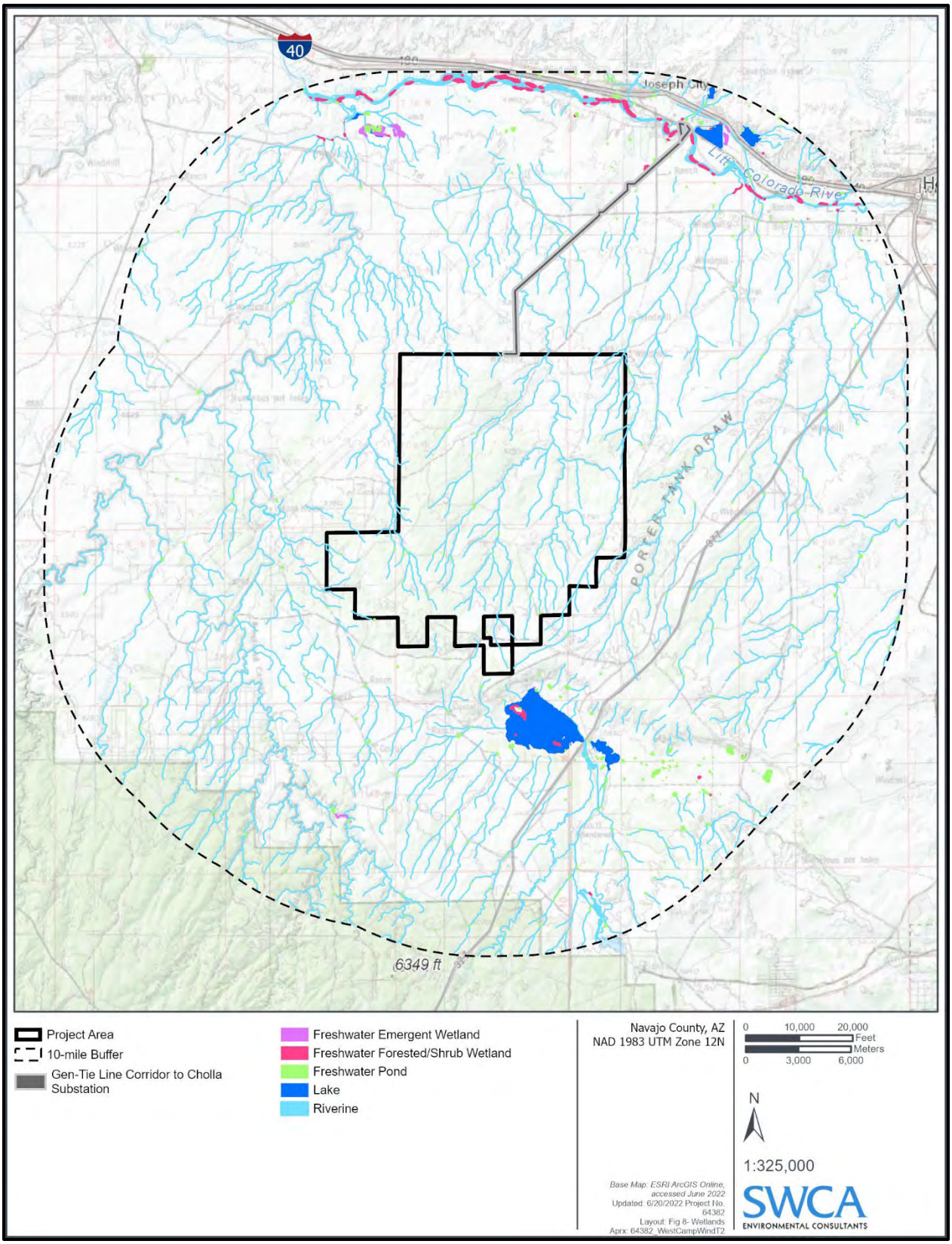

Figure 7. National Wetlands Inventory wetlands within 10 miles of the project area.

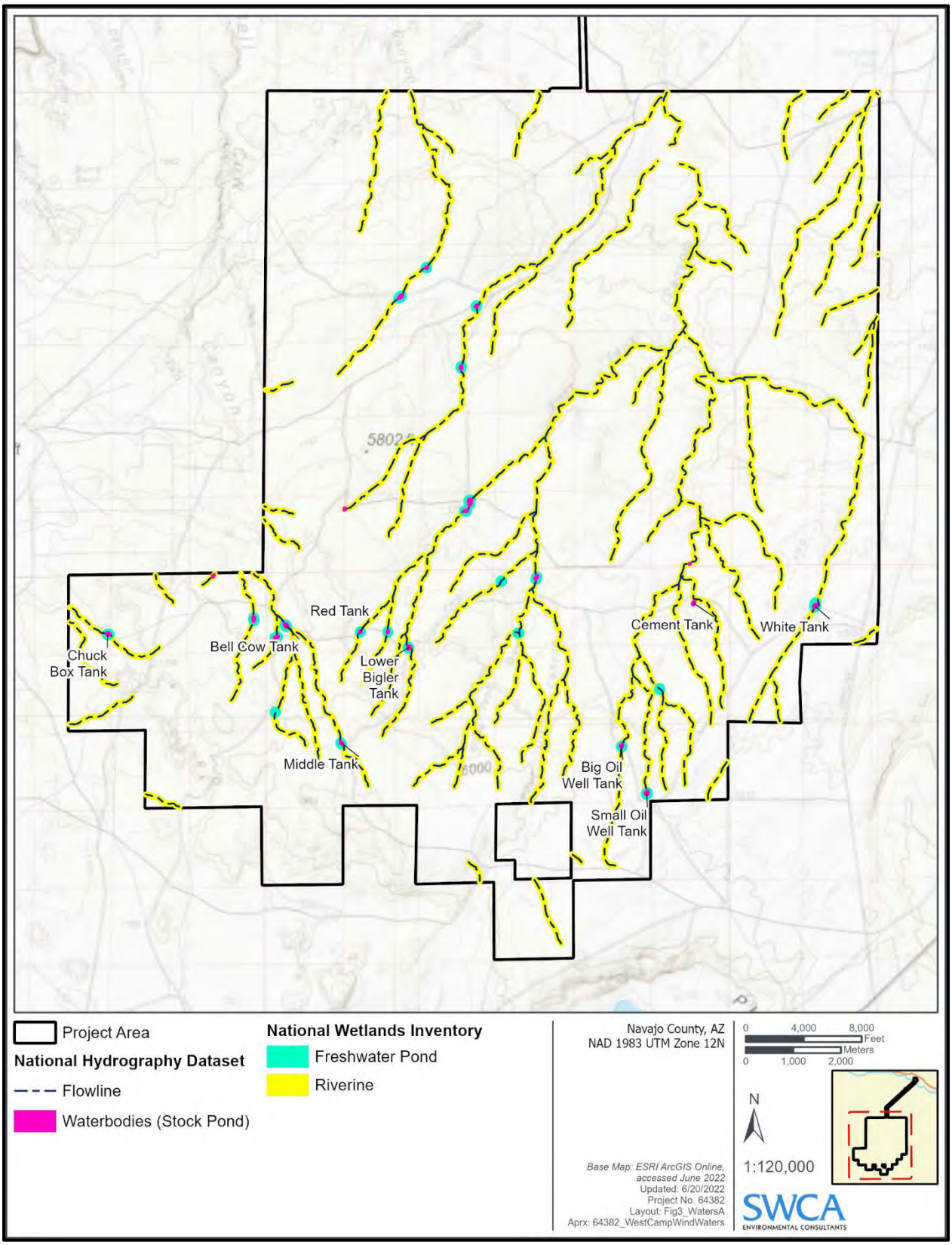

Figure 8. National Wetlands Inventory wetlands, project area detail.

3.1.5 *Special-Status Species Occurrence Determinations*

3.1.5.1 FEDERALLY LISTED SPECIES

Nine species/subspecies (three birds, one amphibian, one insect, one mammal, one reptile, one fish, and one flowering plant) were listed in the official species list for the project (Project Code: 2022-0049201; USFWS 2022a; see Appendix A). Their federal and state status, range/habitat requirements, potential for occurrence in the project area and/or gen-tie, and nearest records, if known, are presented below and in Table 5 and in Section 3.1.5.1.1. The project area is within the geographical/elevational ranges and contains appropriate habitat conditions that could support one of the nine species/subspecies: monarch butterfly (*Danaus plexippus*), a candidate species. The gen-tie may support two of the nine species/subspecies: monarch butterfly, and the endangered Peebles Navajo cactus. Species descriptions for monarch butterfly and Peebles Navajo cactus are provided below.

Both federally protected eagle species (bald eagle [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*]) are known to occur within the project area and may occur within the gen-tie. Their range and habitat requirements are also presented in Table 5. Their potential temporal and spatial use of the project area is presented in Section 3.4.

In addition to eagles and those species on the project's official species list (see Table 5; see Appendix A), the following federally listed species were also evaluated for their potential to occur within the project area because they appear on the Navajo County list (USFWS 2022b) and/or the AGFD (2022a, 2022b) reports (see Appendix B): Apache trout (*Oncorhynchus apache*), black-footed ferret (*Mustela nigripes*), jaguar (*Panthera onca*), Navajo sedge, New Mexico meadow jumping mouse (*Zapus hudsonius luteus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Welsh's milkweed, and Zuni bluehead sucker (*Catostomus discobolus yarrowi*). We confirmed[4] that the project area and gen-tie lack appropriate habitat associations and/or is well outside of the range of these species.

[4] Sources reviewed included AGFD (2022c, 2022d), Brennan (2012), SEINet (2022), and USFWS (2022h).

Table 5. Occurrence Status of Relevant Federally Listed and Eagle Act Species

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Amphibians				
Chiricahua leopard frog (*Rana chiricahuensis*)	T w/ CH	SGCN (1A)	Permanent or semi-permanent springs, stock tanks, lakes, streams, and rivers free of or containing low densities of non-native predators at elevations between 3,200 and 8,900 feet. Emergent and perimeter vegetation provide substrate for egg deposition, thermoregulation, and invertebrate fauna for foraging. The species is often excluded from ephemeral habitats. The species current and/or historical range includes central, east-central, and southeastern portions of Arizona.	**Unlikely to occur.** Project area and gen-tie are outside of the species' predicted range. The project area stock tanks are temporally flooded, contain muddy banks, and are mostly devoid of vegetation cover; such features are marginally suitable for the species. One check dam on-site (within Lost Tank Canyon) has been observed containing emergent vegetation. Nearest species records are approximately 18 miles east-southeast and 18 miles west-southwest of the project area. Critical habitat for the species is located in the Crouch, Gentry, and Cherry Creeks, and Parallel Canyon Unit, approximately 42 miles southwest of the project area.
Birds				
Bald eagle (*Haliaeetus leucocephalus*)	Eagle Act	SGCN (1A)	See description below.	**Known to occur,** species has been documented during project preconstruction surveys. See description below.
California condor *(Gymnogyps californianus*)	E w/ CH EXPN	SGCN (1A)	Nests in caves and ledges of steep rocky terrain or in cavities and broken tops of old-growth conifers in isolated scrubby chaparral and forested montane regions. Presence of adequate food supplies in open, accessible areas, with reliable air movements is an important habitat attribute; foraging occurs over vast expanses in these open habitats. Roosts on rock cliffs, snags, or in live conifer stands. The 10(j) nonessential experimental population (NEP) area is defined by Interstate 40 on the south, U.S. Highway 191 on the east, Interstate 70 on the north, and Interstate 15 to U.S. Highway 93 on the west. While condors comprising the NEP flock maintain a well-established primary range within the NEP area—in southern Utah (Zion National Park Kolob Plateau) and northern Arizona (Kaibab and Paria Plateaus and the Colorado River corridor west of Marble Canyon)—individuals are known to make occasional long-distance forays outside of the area. Condors that leave the NEP area are treated as endangered species under section 9 of the ESA.	**Unlikely to occur.** The project area and gen-tie are 10 miles and directly south of the 10(j) NEP boundary, respectively; however, based on current knowledge of the species' primary range and movements, the species is not expected to occur in the project area or gen-tie (personal communication, Tim Hauck, Condor Reintroduction Program Director, Peregrine Fund, with Allen Graber, Ecologist, SWCA, February 7, 2022). Nearest species records are approximately 70 miles to the northwest (in Flagstaff and vicinity [e.g., Sedona, Williams, Wupatki National Monument]). Critical habitat for this species is located in southern California.

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Golden eagle (*Aquila chrysaetos*)	Eagle Act	SGCN (1B)	See description below.	**Known to occur**, species has been documented during project preconstruction surveys. See description below.
Mexican spotted owl (*Strix occidentalis lucida*)	T w/ CH	SGCN (1A)	Nests and roosts in high-elevation (4,000–10,000 feet) mature mixed conifer forests with uneven-aged tree stands, multi-storied canopy, moderate to high canopy closure, downed logs, and snags or incised rocky canyon habitats with a perennial water source often containing small clumps or stringers of conifer or riparian forests. Foraging, juvenile dispersal, and wintering habitats are more diverse and include a wide variety of forest conditions (including pinyon-juniper), canyon bottoms, cliff faces, tops of canyon rims, and riparian areas. Wintering owls will also use mountain-shrub habitat. In Arizona, subspecies has fragmented distribution in northern, central, east-central, and southern portions of the state.	**Unlikely to occur.** The western portion of the project area is on the edge of the subspecies' predicted, fragmented Mogollon Rim range. Because nearest records are 20 miles to the southwest, and the project area contains only limited, marginally suitable juvenile dispersal and wintering habitats (i.e., fragmented pinyon-juniper) which are regionally ubiquitous, the subspecies is unlikely to occur. The gen-tie, where it extends north of the project area, is outside of the subspecies' predicted range. Critical habitat for the subspecies is located approximately 15 miles west southwest of the project area in Chevelon Canyon, Apache-Sitgreaves National Forests.
Yellow-billed cuckoo (*Coccyzus americanus*)‡	T w/ CH	SGCN (1A)	Nests in low- to moderate-elevation (usually below 6,600 feet) riparian woodlands with native broadleaf trees and shrubs that are 50 acres or more in extent. Most associated with cottonwood/willow-dominated vegetation cover, but composition of dominant riparian vegetation can vary across range. Has not been found nesting in isolated patches (1–2 acres) or narrow, linear riparian habitats less than 10 to 20 m wide; migrant cuckoos have been detected in these habitats. During migration, uses a wider array of forest and shrub habitats but is rarely observed away from riparian habitats.	**Unlikely to occur.** The project area and gen-tie are outside of the species' predicted range. The project area does not contain riparian habitats. The riparian habitats where the gen-tie would span the Little Colorado River are sparse (isolated pockets or narrow stringers of tamarisk [*Tamarix* spp.]) and unlikely to support migrating individuals. Nearest occurrences are approximately 11 miles northeast of the project area, 6 miles east of the gen-tie. Critical habitat for the species is located approximately 64 miles west of the project area (Beaver Creek, Arizona).

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Fishes				
Little Colorado spinedace (*Lepidomeda vittata*)	T w/ CH	SGCN (1A)	Pools with water flowing over fine gravel and silt-mud substrates of medium to small streams at elevations between 4,000 and 8,000 feet. Four populations exist in Arizona: the mainstem of the Little Colorado River, Nutrioso Creek, Clear Creek, and Chevelon Creek.	**Unlikely to occur.** The project area and gen-tie are outside of the species' AGFD predicted range and USFWS current habitat. Nearest current habitat is along Chevelon Creek, approximately 4 miles northwest of the project area (7 miles west of the gen-tie). The species has been documented within 10 miles of the project area, but not within 3 miles of the gen-tie. This known occurrence is likely from Chevelon Creek. Critical habitat for this species is located in Chevelon Creek, 5 miles northwest of the project area (7 miles west-northwest of the gen-tie) (see Figure 9).
Flowering Plants				
Peebles Navajo cactus (*Pediocactus peeblesianus* var. *peeblesianus*)	E	HS	See description below.	**May occur in the northern extreme of the gen-tie only (adjacent to the Little Colorado River)**, documented within 10 miles of the project area; within 3 miles of the gen-tie. See description below.
Insects				
Monarch butterfly (*Danaus plexippus*)	C	–	See description below.	**May occur**, see description below.
Mammals				
Gray wolf (Mexican wolf population; *Canis lupus baileyi*)†	Proposed EXPN†	SGCN (1A)	Inhabits evergreen pine-oak woodlands, and mixed-conifer mountainous forests inhabited by elk, deer, and cattle above 4,000 feet. The Mexican Wolf Recovery (or Non-Essential Experimental Population) Area (MWEPA) encompasses Arizona and New Mexico from Interstate 40 south to Mexico. Wolves living in the MWEPA are designated as NEP (treated as proposed for listing under section 9 of the ESA).	**Unlikely to occur**. The project area and gen-tie are within MWEPA management area Zone 2, where the species is allowed to naturally disperse. The project area and gen-tie contain suitable, albeit limited, pinyon-juniper woodlands inhabited by elk and cattle; however, because the subspecies current occupied range is 20 miles to the southeast and 27 miles to the west, including canyons and highways in between, it is unlikely young may disperse from core areas to the project area or gen-tie. Historically, the species has not been documented within 10 miles of the project area. The nearest recent recorded sighting of a Mexican wolf was a member of the Owl Canyon pack in May 2022, 38 miles southeast of the project area (near Show Low, Arizona).

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Reptiles				
Northern Mexican gartersnake (*Thamnophis eques megalops*)	T w/ CH	SGCN (1A)	Riparian obligate. Lotic and lentic habitats that include cienegas and stock tanks (earthen impoundments), and rivers containing pools and backwaters. Most frequently found between 3,000 and 5,000 feet but may occur up to approximately 8,500 feet. Use adjacent terrestrial habitats for foraging, thermoregulation, gestation, shelter, immigration, emigration, and brumation. Found in areas of high native prey (fish and leopard frogs) concentration. Core population areas in Arizona include mid/upper Verde River drainage, mid/lower Tonto Creek, and the San Rafael Valley.	**Unlikely to occur**. The project area is outside of the subspecies' predicted range and extant populations. Nearest subspecies occurrences are approximately 15 miles northeast of the project area (6 miles northeast of the gen-tie). Critical habitat for the subspecies is located approximately 60 miles southwest of the project area (Tonto Creek).

Note: Table includes Eagle Act species and those species listed in USFWS 2022a). Notes regarding documentation within 10 miles of the project area and 3 miles of the gen-tie are from AGFD (2022a, 2022b). Additional sources: AGFD (2022c, 2022d), Brennan (2012), eBird (2022a), Finkelstein et al. (2020), Gutierrez et al. (2020), Southwest Condor Working Group (2017), USFWS (2004, 2007a, 2015, 2022a, 2022f, 2022g, 2022h).

* Federal Status Definitions

C = Candidate. Species for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species are not protected by take prohibitions of section 9 of the ESA.

CH = Designated critical habitat.

E = Endangered. Species which are in danger of extinction throughout all or a significant portion of their range. Endangered species are protected by take prohibitions of section 9 of the ESA.

EXPN = Experimental population, non-essential.

T = Threatened. Species likely to become endangered within the foreseeable future throughout all or a significant portion of their range. Threatened species are protected by take prohibitions of section 9 of the ESA.

State Status Definitions

HS = Highly safeguarded. Those species of native plants and parts of plants, including the seeds and fruit, whose prospects for survival in Arizona are in jeopardy or which are in danger of extinction throughout all or a significant portion of their ranges

SGCN = Species of Greatest Conservation Need. Species identified by AGFD (2012b) as having conservation priority. Tier 1A species are those categorized by AGFD (2012b) as "highest priority vulnerable" species. Tier 1B species are those categorized as "vulnerable" but not fitting the Tier 1A criteria for highest priority.

3.1.5.1.1 Occurrence Justifications – Federally Listed and Eagle Act Species That May Occur within the Project Area or Gen-Tie

The following federally listed and Eagle Act species may occur within the project area or gen-tie.

Bald Eagle

The bald eagle is protected under the MBTA and Eagle Act and is an SGCN 1A species. Nests are generally placed in large deciduous or coniferous trees or cliffs, with a commanding view of the area, less than 1 mile from appropriate aquatic foraging conditions (e.g., perennial rivers or lakes containing fish) (Buehler 2000). The species communally roosts in the winter in large (15–60 m in height) deciduous or coniferous trees which tend to be located near aquatic foraging sites (<50 m) but may be located >6 miles from aquatic foraging sites, particularly in areas sheltered from adverse weather conditions with unusually high prey or carcass availability (AGFD 2022c; Buehler 2000; USFWS 2007b, 2013). Wintering/non-breeding individuals and juveniles are typically associated with breeding habitats; however, they may range widely in search of food, shelter, and reduced human presence (Buehler 2000).

The project area and gen-tie are within the non-breeding and limited breeding ranges of the species and may provide foraging resources (see Section 3.4). They do not contain characteristic nesting or roosting habitats. Nearest documented nesting areas are approximately 20 miles to the southwest (Chevelon Canyon Lake) and 30 miles to the southeast (Silver Creek) (Southwestern Bald Eagle Management Committee 2022). The species has been documented within the project area during project-specific surveys, and is known to occur throughout the region, particularly from late summer through winter. Information on the nearest known breeding areas and potential spatial and temporal use of the site by the species is provided in Sections 3.3.2.6 and 3.4.

Golden Eagle

The golden eagle is protected under the MBTA and Eagle Act and is an SGCN 1B species. The species requires large open hunting grounds adjacent to mountainous canyonland and rimrock terrain of open desert, grassland, and forested areas (Katzner et al. 2020; Marzluff et al. 1997). Presence of sizeable shrub (e.g., sagebrush/ rabbitbrush) patches is an essential component of golden eagle home ranges (Marzluff et al. 1997). Nests are placed in rugged terrain (e.g., cliffs); less often in forested areas (e.g., ponderosa pine [*Pinus ponderosa*], Fremont cottonwood [*Populus fremontii*]) and on human-made structures (e.g., transmission towers) (Katzner et al. 2020). Wintering/non-breeding individuals and juveniles are typically associated with breeding habitats; however, they may range widely in search of food (Katzner et al. 2020).

The project area and gen-tie are within the golden eagle's year-round range and contain appropriate foraging (i.e., open grassland and steppe-like vegetation communities; Kochert et al. 2002) and limited, marginal nesting habitats. The species breeds throughout the region, including within 10 miles of the project area (see Section 3.3.2.6). The species has been documented within the project area during project-specific surveys. Information on the nearest known breeding areas and potential spatial and temporal use of the site by the species is provided in Sections 3.3.2.6 and 3.4.

Monarch Butterfly

The monarch butterfly is a candidate species. There are no statutory protections under the ESA for candidate species, but USFWS encourages opportunities to conserve the species. Populations in western North America (including most of Arizona) migrate either to California or Mexico for the winter (USFWS 2020b) or may overwinter in the low deserts in California or Arizona (Morris et al. 2015). In middle elevations of Arizona, the species may occur as early as late March and early April, becoming

more abundant in late July and August. Peak fall migration is from September through mid-October (Morris et al. 2015). In the southwestern United States, migrating monarchs often occur near water sources, such as rivers, creeks, riparian corridors, roadside ditches, or irrigated gardens. Multiple generations of the butterflies are produced each year. Their larvae are obligate feeders on plants in the Asclepiadaceae family, primarily species of milkweeds. They are found in a variety of habitats. During fall migration in Arizona, monarchs favor nectar from native plants, including sunflowers (*Helianthus* spp.), rabbitbrush (*Ericameria* spp.), thistles (Family Asteraceae), milkweeds, and a variety of other native and garden plants (Morris et al. 2015).

The project area and gen-tie are within the species expansive breeding and migration range (USFWS 2022g). The project area contains, and the gen-tie may contain, appropriate blooming nectar resources: broadleaf milkweed plants (flower from June–September) and other nectar plant species have been observed in the project area during preconstruction wildlife surveys. Nearest adult sightings and breeding records are approximately 40 miles to the northwest and southwest, respectively (Western Monarch Milkweed Mapper 2022).

Peebles Navajo Cactus

The Peebles Navajo cactus is federally listed as endangered and an ANPL Highly Safeguarded native plant; no critical habitat has been designated for the species. The species is a narrow endemic (having a 1 mile-wide × 7-mile-long distribution) extending northwest to southeast within the immediate vicinity of Joseph City and Holbrook, north of the Little Colorado River. It is restricted to specialized and localized soils that are shallow to deep, well to extremely well drained, and that formed in mixed alluvium belonging to the Gypsiorthids-Torriorthents-Haplargids Association occurring between 5,100 and 5,650 feet (Phillips and Phillips 1995 as cited in USFWS 2008; USFWS 2008). Specific soil conditions are further described as weakly alkaline, Little Colorado paleochannel gravel deposits, eroding from or "uncomfortably on top of" underlying Shinarump conglomerate of the Chinle formation (Taylor 2008, as cited in AGFD 2009; personal communication, Barbara Phillips, Botanist, former U.S. Forest Service, Coconino National Forest, with Dorothy House, Technical Writer, SWCA, May 6, 2022). It occurs on gentle—5 to 60 percent—slopes on all facing aspects.

The species has been documented within 10 miles of the project area (AGFD 2022a), and within 3 miles of the gen-tie (AGFD 2022b). The project area is outside of the species' range and does not contain appropriate habitat conditions. The USFWS (2022h) indicates the northern extent of the gen-tie is within the species' range; however, the species is not known to occur in that area. That northern extreme of the gen-tie does not appear to contain appropriate soil conditions (i.e., Chinle formation, Gypsiorthids-Torriorthents-Haplargids Association, gravelly soils), as mapped by the NRCS's (2019) Web Soil Survey. However, due to the proximity of appropriate soil conditions (2 miles northwest of the gen-tie [south of the Little Colorado River]) and the known population (approximately 1 mile north of the gen-tie terminus), and that appropriate soil conditions may be present locally (at a finer scale than the NRCS mapping), the species' occurrence may not be entirely ruled out at the northern extent of the gen-tie line. Site specific soil typing and surveys for the species may be used to inform gen-tie line siting to avoid impacting the species.

3.1.5.2 OTHER SPECIAL-STATUS SPECIES

Table 6 presents the range/habitat requirements and nearest records, if known, and potential for occurrence determinations for 1) SGCN 1A and 1B species provided by AGFD (2022a, 2022b), 2) select BCC species listed for BCR 16 (USFWS 2021), and 3) special-status plant species documented within 10 miles of the project area (AGFD 2022a) and/or 3 miles of the gen-tie (AGFD 2022b). BCCs were excluded from Table 6 if they were not SGCN 1A or 1B species provided by AGFD (2022a) and it was

determined that the project area lacks appropriate habitat associations and/or is outside of the species' range. Among these select BCCs, SGCN 1C status is noted in the table if relevant.

Table 6. Occurrence Status of Other Relevant Special-Status Species

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Amphibians				
Arizona toad (*Ananxyrus microscaphus*)	–	SGCN (1B)	Riparian habitats containing shallow, flowing, permanent water over sandy or rocky substrates, typically in river canyons or foothill streams below 8,000 feet. Range in Arizona extends northwest to southeast through central portions of the state, including below the Mogollon Rim.	**Unlikely to occur**. Although Dry Lake, approximately 1.5 miles south of the project area, is within the species' predicted range, the project area does not contain appropriate habitat associations for this species. The Little Colorado River, where the gen-tie would span the river, is also within the species' predicted range, but is ephemeral along that stretch. Nearest record is approximately 22 miles south-southwest of the project area.
Northern leopard frog (*Lithobates pipiens*)	–	SGCN (1A)	Variety of habitats usually in permanent waters with rooted aquatic vegetation from sea level to 11,000 feet. In Arizona, limited to stock tanks, wildlife waters, and a lake. Range includes northern and central portions of the state.	**May occur, particularly in western side of project area**. Western portion of the project area is within the predicted range for this species and contains limited habitat associations (ephemeral stock tanks). The gen-tie, where it would span the Little Colorado River, is outside of the species' predicted range. Historical element occurrences are north of the project area near the Little Colorado River, approximately 2 miles east of the gen-tie northern terminus.
Birds				
Bendire's thrasher (*Toxostoma bendirei*)	BCC	SGCN (1C)	Desert habitats: open grassland, shrubland, or woodland with scattered shrubs or trees from sea level to approximately 6,000 feet. Breeding range includes northern two-thirds of Arizona; year-round range includes southern third of the state.	**Known to occur.** The project area and gen-tie are within the breeding range and contain appropriate habitat associations. This species has been documented during project preconstruction surveys.
Black-chinned sparrow (*Spizella atrogularis*)	BCC	SGCN (1C)	Arid brushlands on slopes of chapparal, sagebrush, and pinyon-juniper from sea level to 9,000 feet. Breeding range includes northwestern, central, and east-central portions of Arizona. Non-breeding range includes southeastern and southwestern portions of the state.	**May occur.** The project area and gen-tie are on the northern edge of the breeding range within east-central Arizona and contain sloped pinyon-juniper and shrub habitats. Nearest record is near Holbrook, approximately 6 miles east of the gen-tie northern terminus.
Broad-tailed hummingbird (*Selasphorus platycercus*)	BCC	--	Open woodland, especially pine, pine-oak, pinyon-juniper, and conifer-aspen associations, brushy hillsides, montane scrub, and thickets. Breeding range fragmented throughout Arizona expect for southwestern extreme of the state.	**Known to occur.** The project area and gen-tie are within the fragmented breeding range and contain appropriate habitat associations. This species was documented during project preconstruction surveys.
Cassin's finch (*Haemorhous cassinii*)	BCC	--	Open coniferous forests across broad elevational range including ponderosa pine and pinyon pine associations. Non-breeding range includes central, east-central, and southeastern portions of Arizona; year-round range includes north-central and northeastern portions of the state.	**May occur.** The project area and gen-tie are within the species' non-breeding range and contain appropriate habitat associations. Nearest record is approximately 10 miles north of the project area, 2 miles east of the gen-tie northern terminus.

Common Name (*Scientific Name*)	**Status***		**Range/Habitat Requirements**	**Occurrence Status**
	Federal	**State**		
Clark's nutcracker (*Nucifraga columbiana*)	BCC	--	Breeding habitat includes coniferous forest from montane to subalpine zones, including pinyon-juniper woodland, pinyon pine, ponderosa pine, and Douglas fir, and mixed coniferous subalpine communities. The species' year-round range includes the northeastern portion of Arizona.	**May occur.** The project area and gen-tie are within the species' year-round range and contains appropriate habitat associations. Nearest record is approximately 10 miles northeast of the project area, 7 miles east-southeast of the gen-tie northern terminus.
Common nighthawk (*Chordeiles minor*)	–	SGCN (1B)	Variety of open habitats, including sagebrush and desert grassland, prairies and plains, open forests, croplands, rock outcrops, and gravel rooftops. Breeding range includes northeastern and southeastern portions of Arizona.	**Known to occur.** The project area and gen-tie within the species' breeding range and contains appropriate habitat associations. This species has been documented during preconstruction wildlife surveys within the project area.
Evening grosbeak (*Coccothraustes vespertinus*)	BCC	SGCN (1B)	Mixed-conifer and spruce-fir forests; less common in pine-oak, pinyon-juniper, ponderosa pine, and aspen forests. In winter, flocks typically observed in pinyon-juniper and ponderosa pine ecotone. Year-round (scarce) range includes northeastern Arizona; non-breeding (scarce) range includes central, west-central, northwestern, and southeastern portions of the state.	**May occur.** The project area and gen-tie are within the non-breeding (scarce) range, the western edge of the year-round (scarce) range and contain pinyon-juniper woodlands. Nearest record is approximately 10 miles northeast of the project area, 7 miles east-southeast of the gen-tie northern terminus.
Ferruginous hawk (*Buteo regalis*)	–	SGCN (1B)	Grasslands, shrub-steppe, pinyon-juniper, sparse riparian forests, and canyon areas with cliffs and rock outcrops. Year-round range includes roughly northern half of Arizona; wintering range includes roughly southern half of the state.	**Known to occur.** The project area and gen-tie are within the species' year-round range and contain appropriate habitat associations. This species has been documented during preconstruction wildlife surveys within the project area.
Lewis's woodpecker (*Melanerpes lewis*)	BCC	SGCN (1C)	Ponderosa pine and open riparian forests dominated by cottonwood with brushy understory and dead or downed woody material; may also use oak, pinyon-juniper, and pine-fir woodlands, and nut and fruit orchards. Year-round range includes northern portion of Arizona. Non-breeding range includes northwestern, central, and southeastern portions of the state.	**May occur.** The project area and gen-tie are on the boundary of the year-round and non-breeding ranges and contain pinyon-juniper habitats. Nearest record is 8 miles northwest of the project area (9 miles west of the gen-tie) (Chevelon Canyon).
Lincoln's sparrow (*Melospiza lincolnii*)	–	SGCN (1B)	Uses shrub-dominated habitats, particularly riparian sites, but also brushy forest edges and weedy fields during migration. Non-breeding range includes southwest half and east-central portion of Arizona. Migration range includes northeastern Arizona. Isolated breeding locations are known in north-central and east-central portions of the state.	**May occur**. The project area and gen-tie are within the migration range for this species and contains shrubby/brushy habitats. Nearest records are 6 miles southeast of the project area (near Dry Lake) and directly adjacent to the gen-tie northern terminus (in association with Little Colorado River).

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Long-eared owl (*Asio otus*)	BCC	SGCN (1C)	Open forests and dense vegetation adjacent to grasslands or shrublands. Rare breeding and wintering range in Arizona.	**May occur**. The project area and gen-tie are within the species' year-round (rare) range and contain appropriate habitat conditions. The species is known to nest in the region. Nearest species record is approximately 6 miles southeast of the project area (near Dry Lake).
Mountain plover (*Charadrius montanus*)	BCC	SGCN (1B)	Short-grass prairie dominated by blue grama; also, fallow or recently tilled agricultural fields. Often associated with prairie dog colonies. In migration, can use alkaline or mud soils. Wintering range includes central and southern portions of Arizona.	**Unlikely to occur**. The project area and gen-tie contain blue grama grassland but are outside of the species' breeding and non-breeding ranges. Nearest record is approximately 30 miles northwest of the project area and gen-tie.
Olive-sided flycatcher (*Contopus cooperi*)	BCC	SGCN (1C)	Openings or edges of coniferous forests, particularly burned ponderosa forests in Arizona; also, coniferous-deciduous forests and forested edges of wetlands. In migration use greater diversity of habitats including substantially more riparian and nonconiferous forests Breeding range includes northeastern half of Arizona; migration range includes southwestern half of the state.	**May occur, particularly at the northern end of the gen-tie**. Project area is on the edge of the species' breeding and migration ranges and contains limited habitat associations. Species more likely to occur, particularly as migrant, where the gen-tie would span the Little Colorado River than within the project area. Nearest species records are approximately 10 miles north of the project area (just east of the gen-tie northern terminus).
Pacific wren (*Troglodytes pacificus*)	–	SGCN (1B)	Wide range of habitats from sea level to 12,000 feet, particularly riparian conditions with various-age stands in old-growth and mature conifer forests. Breeding range in Arizona includes linear strip from north-central to east-central portions of the state (Mogollon Rim). Non-breeding range includes the Arizona-California border.	**Unlikely to occur**. Project area and gen-tie are just outside (northeast) of the species' breeding range and do not contain appropriate habitat conditions. Nearest species record is approximately 30 miles southwest of the project area.
Peregrine falcon, American peregrine falcon (*Falco peregrinus anatum*)	–	SGCN (1A)	Variety of biomes; generally associated with cliffs and open landscapes. Year-round range includes most of Arizona except for east-central portion of the state. Breeding and migration range includes north-central portion of the state.	**Known to occur**. The project area and gen-tie are within the subspecies' year-round range and contain appropriate habitat conditions. This species has been documented during project preconstruction surveys.
Pinyon jay (*Gymnorhinus cyanocephalus*)	BCC	SGCN (1B)	Pinyon-juniper woodland; also found in sagebrush, scrub oak, and chaparral. Year-round range includes northern half of Arizona.	**Known to occur.** The project area is within the species' year-round range and contains appropriate habitat associations. This species has been documented during project preconstruction surveys.
Snowy plover (*Charadrius nivosus*)	BCC	SGCN (1B)	Inland habitats include wastewater and salt-evaporation ponds, alkaline and saline lakes, reservoirs, and riverine sand bars. Migrates throughout Arizona except eastern edge of the state. Isolated breeding locations in southern portion of the state.	**Unlikely to occur.** The project area and gen-tie are within the species' migration range; however, appropriate habitat associations are not present. Nearest records are 3 miles south of the project area (Dry Lake), and 6 miles east of the gen-tie northern terminus (Hidden Cove Golf Course, Holbrook).

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Virginia's warbler (*Leiothlypis virginiae*)	BCC	SGCN (1C)	Breeds in a variety of scrub-woodlands with dense understory vegetation, including oak, pinyon-juniper, and mixed conifer forests. Commonly seen in pine habitats and riparian corridors during spring and fall migration. Migration range includes southeastern and central portions of the state; breeding range includes fragmented locations through the state except for southwestern Arizona.	**May occur.** Project is within the species' fragmented breeding range of east-central Arizona and contains appropriate habitats. Nearest species records are 5 miles south (near Dry Lake), 10 miles west (Chevelon Canyon), and 10 miles north of the project area (adjacent to the gen-tie northern terminus).
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	BCC	--	Nests in emergent vegetation of deep-water palustrine wetlands in prairie wetlands, mountain meadows, and arid regions. Forages in wetlands and surrounding grasslands, croplands, or savanna. Migrates and overwinters in agricultural areas. In Arizona, breeding range includes north-central and east-central portion of the state; non-breeding range includes southeastern Arizona. Migrates throughout the western and northern portions of the state.	**May occur.** The project area and gen-tie are on the edge of the species' breeding and non-breeding ranges and contains appropriate habitat associations to support foraging and migrating individuals. Nearest records are 4 miles south of the project area and at the northern terminus of the gen-tie.
Yellow warbler (*Setophaga petechia*)	–	SGCN (1B)	Wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats. Migration habitat includes scrub/shrub and semi-open, second-growth forest, often associated with wetlands. Migrates through most of Arizona. Breeds in central, east-central, and south-central portions of the state; breeding (scarce) range includes northern portion of the state.	**May occur.** The project area and gen-tie are within the species' breeding range for this species. Habitat associations are limited in extent and marginally suitable: the species may occur on the edges of project area stock tanks, or along the Little Colorado River (where the gen-tie would span the river), particularly during migration. Nearest records are 10 miles north of the project area and directly adjacent to the gen-tie northern terminus.
Bivalve				
California floater (*Anodonta californiensis*)	–	SGCN (1A)	Shallow areas of unpolluted lakes, reservoirs, and perennial streams with relatively stable water levels of low velocity flow regime from 4,000 to 8,700 feet. In Arizona, found in east-central portion of the state.	**Unlikely to occur**. The project area and gen-tie do not contain suitable habitat associations. Nearest record is approximately 10 miles west of the project area (Chevelon Creek).
Fishes				
Little Colorado sucker (*Catostomus* sp. 3)	–	SGCN (1A)	Pools and riffles of creeks, small rivers, and impoundments from 670 to 7,400 feet. Endemic to the upper portion of the Little Colorado River and its north-flowing tributaries in Coconino, Navajo, and Apache Counties.	**Unlikely to occur.** Documented with 10 miles of the project area; but not within 3 miles of the gen-tie. The species' predicted range includes Chevelon Creek (west of the project area) and a portion of the Little Colorado River west of the gen-tie. The project area and gen-tie, including where the gen-tie would span the Little Colorado River, lack appropriate habitats. Nearest species' records are 8 miles northwest of the project area (9 miles west of the gen-tie) (Chevelon Creek).

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Roundtail chub (*Gila robusta*)	–	SGCN (1A)	Pools adjacent to swifter riffles and runs of cool to warm mid-elevational streams and rivers from 1,200 to 7,200 feet. In Arizona, occurs in two tributaries of the Little Colorado River (Chevelon and East Clear Creeks), several tributaries of the Bill Williams River basin, the Salt River and four of its tributaries, Aravaipa Creek, and Eagle Creek.	**Unlikely to occur.** Documented within 10 miles of the project area, but not within 3 miles of the gen-tie. The species predicted range includes Chevelon Creek (west of the project area). The project area and gen-tie, including where the gen-tie would span the Little Colorado River, lack appropriate habitats. Nearest records approximately 5 miles west-northwest of the project area (Chevelon Creek).
Flowering Plants				
Grama-grass cactus; paperspine fishhook cactus (*Sclerocactus papyracanthus*)	--	SR	Grasslands and pinyon-juniper woodland communities, especially in red, sandy soils with a calcareous or gypseous component, on open flats or gentle slopes from 5,000-7,500 feet. Associated with blue grama and dropseed grasses. In Arizona, occurs in east-central portion of the state.	**Known to occur.** The project area and gen-tie are within the species' geographic range and contain appropriate habitat associations. This species has been documented in the project area during project preconstruction surveys.
Roundleaf errazurizia; roundleaf dunebroom (*Errazurizia rotundata*)	--	SR	Dunes, sandy soils in red or white sandstone, deep alluvial cinders in sandstone breaks, gravelly soils in calcareous outcrops, and hard red sandstone pavement from 4,600 to 5,200 feet. Associated with desert-scrub with widely spaced shrubs. Species found near Tuba City, Winslow, Holbrook, and Wupatki National Monument.	**May occur.** The project area and gen-tie are within the species' geographic range and contain appropriate habitat associations. Documented within 10 miles of the project area and within 3 miles of the gen-tie. Nearest species' records approximately 8 miles north and northeast of the project area, just east of the northern terminus of the gen-tie.
Whipple's fishhook cactus (*Sclerocactus whipplei*)	--	SR	Gravelly or sandy hills, canyon rims and mesas, of desert grasslands, sagebrush or saltbrush flats, and pinyon-juniper woodlands, from 5,000 to 6,000 feet. In Arizona, found in northeastern portion of the state in the vicinity of the Little Colorado River drainage and near Tuba City.	**May occur.** The project area and gen-tie are within the species' geographic range and contain appropriate habitat associations. Documented within 10 miles of the project area and within 3 miles of the gen-tie. Nearest species' records approximately 8 miles north and northeast of the project area, just east of the northern terminus of the gen-tie.
Mammals				
American beaver (*Castor canadensis*)	–	SGCN (1B)	Permanent water sources. Prefers low-gradient streams, ponds, and small-bottomed lakes with dammable outlets. Found throughout Arizona except south-central portion of the state.	**Unlikely to occur.** The project area and gen-tie do not contain permanent waters. Nearest records are approximately 75 miles west of the project area and gen-tie.
Arizona myotis (*Myotis occultus*)	–	SGCN (1B)	Day roosts and maternity colonies in tree cavities and crevices; maternity colonies also in buildings and bridges; winter roost records from mines. Riparian areas and ponderosa pine and oak-pine woodland near water below 8,600 feet. Also found along permanent water. In Arizona range includes central band from east to west and north-central portions of the state.	**May occur**. Project area and gen-tie are within the species' geographic range. Habitat associations are not present; however, the species may generally move through the area. Nearest species records are in the vicinity (just southwest of) of the project area.

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Brazilian free-tailed bat (*Tadarida brasiliensis*)	–	SGCN (1B)	Wide variety of habitats from desert communities through pinyon-juniper woodlands and pine-oak forests at elevations up to approximately 9,000 feet. Maternity colonies and roosts found in limestone caves, abandoned mines, bridges, buildings, and hollow trees. Range throughout Arizona.	**May occur.** The project area and gen-tie are within the species' geographic range and contain appropriate habitat associations. Documented within 10 miles of the project area; nearest records appear to be directly adjacent to the east and southeast of the project area.
Gunnison's prairie dog (*Cynomys gunnisoni*)	–	SGCN (1B)	Gently sloping grasslands and semi-desert and montane shrublands between 4,600 and 12,000 feet. In Arizona, range includes central and northeastern portions of the state.	**May occur.** The project area and gen-tie are within the species' geographic range and contain appropriate vegetative community conditions. The project area's sandy substrates may not be favorable for the species establishment. The species has not been detected during preconstruction surveys (October 2019–November 2021). Nearest record is approximately 14 miles to the southeast.
Kit fox (*Vulpes macrotis*)	–	SGCN (1B)	Open desert, shrubby, or shrub-grass habitat. In Arizona occurs in much of state except for a narrow band extending from east-central through central and north-central portions of the state.	**May occur.** The project area and gen-tie are within the species' predicted range and contain appropriate shrub-grass habitats. Nearest species record is approximately 75 miles to the west.
Mexican vole (*Microtus mexicanus*)	–	SGCN (1B)	Meadows of grasses, sedges, and forbs within ponderosa forests on steep mountain slopes from 3,100 to 8,400 feet. May also associate with drier sites where groundcover is suitable and in pinyon-juniper and pine-oak associations. In Arizona, fragmented range from east-central, central, northwestern, and northeastern portions of the state.	**Unlikely to occur.** The project area is outside of the species' predicted range and habitat associations are only marginally suitable. Nearest record is approximately 17 miles southwest of the project area.
Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)	–	SGCN (1B)	Day roosts and maternity and hibernation colonies in caves, mines, or buildings. Night roosts may include caves, buildings, and tree cavities. Associated with mesic forested habitats but occupies a broad range of habitats, including arid scrub, pine forest, pinyon-juniper, and wooded canyons between 500 and 8,400 feet. Range throughout Arizona.	**May occur.** The project area and gen-tie are within the subspecies' geographic range and contains appropriate habitat associations. Nearest record is approximately 7 miles southeast of the project area.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	–	SGCN (1B)	Rugged canyons and rocky outcroppings below 7,500 feet. Associated with water sources in low deserts, desert scrub, and pine-oak forests, including large and small water tanks and ephemeral pools. Day roosts in rock crevices in cliffs and shallow caves and may roost in buildings or under roof tiles. In Arizona, found in roughly the southern half of the state.	**Unlikely to occur**. Documented within 10 miles of the project area. The project area and gen-tie are outside of the species' predicted range.

Common Name (*Scientific Name*)	**Status***		**Range/Habitat Requirements**	**Occurrence Status**
	Federal	**State**		
Pronghorn, American pronghorn (*Antilocapra americana americana*)	–	SGCN (1B)	Grasslands, sagebrush plains, deserts, and foothills. In Arizona, scattered populations throughout the state. Subspecies range includes narrow band from east central through north-central, and northwestern portions of the state. Small, fragmented range in southeastern portion of the state.	**Known to occur.** The project area and gen-tie are within the species' geographic range and contain appropriate habitat associations. This species has been documented in the project area during project preconstruction surveys
Spotted bat (*Euderma maculatum*)	–	SGCN (1B)	Roosts in crevices and cracks of cliff faces; sometimes roosts in caves or in buildings near cliffs. Variety of habitats, including low to high deserts, riparian areas, ponderosa, and spruce-fir forests below 10,600 feet. Range throughout Arizona.	**May occur**. Project area and gen-tie are within the species' geographic range. Nearest species record is approximately 80 miles southeast of the project area.
Springerville pocket mouse (*Perognathus flavus goodpasteri*)	–	SGCN (1B)	Plains-like short grasslands interspersed with volcanic rock or other sparsely vegetated grasslands at elevations from 5,200 to 7,000 feet. In Arizona, found in grasslands of eastern end of Mogollon Plateau near Springerville, Snowflake, south of Holbrook, and on the south side of plateau along Nash Creek.	**May occur.** Documented within 10 miles of the project area. The project area and gen-tie are within the subspecies' geographic range and contain appropriate habitat associations. Nearest records are 10 miles east and northeast of the project area; 7 miles east of the gen-tie.
Stephen's woodrat (*Neotoma stephensi*)	–	SGCN (1B)	Rocky areas in pinyon-juniper woodlands. In Arizona, found roughly in north half of state.	**May occur.** The project area and gen-tie are within the geographic range and contains appropriate habitat associations. Nearest records are approximately 18 miles southwest and 18 miles east of the project area.
Western red bat (*Lasiurus blossevillii*)	–	SGCN (1B)	Roosts in trees, particularly cottonwoods. Associated with broad-leaf deciduous riparian forests and woodlands from 1,900 to 7,200 feet. In Arizona, range includes northwestern through southeastern portions of the state.	**Unlikely to occur.** The project area and gen-tie are just outside of the species' geographic range and do not contain appropriate habitat conditions. Nearest species record is approximately 60 miles west-southwest of the project area.
Yuma myotis (*Myotis yumanensis*)	–	SGCN (1B)	Roosts in caves, mines, cliff crevices, buildings, bridges, and similar structures. Nursery colonies in buildings, caves, mines, and bridges. Associated with wide variety of upland and lowland habitats (within wide range of elevations: sea level to 11,000 feet), including riparian, desertscrub, moist woodlands, and forests where they prefer cliffs and rocky walls near water. In Arizona, ranges throughout except south-central portion of the state.	**May occur**. Project area and gen-tie are within the species' geographic range. Nearest species' records are just south of the project area.

Common Name (*Scientific Name*)	Status*		Range/Habitat Requirements	Occurrence Status
	Federal	State		
Reptiles				
Pai striped whiptail (*Aspidoscelis pai*)	–	SGCN (1B)	Grasslands, chapparal, conifer woodlands, and ponderosa pine parklands from approximately 4,800 to 7,600 feet. Populations scattered across the Colorado Plateau of northern Arizona and in the Mazatzal Mountains of central Arizona.	**May occur.** The project area and gen-tie are on the edge of the species' geographic range and contains appropriate habitat associations. Nearest record is approximately 27 miles east of the project area.

Note: Table includes those Tier 1A and 1B species listed in AGFD (2022a, 2022b), BCCs for BCR 16 that either may occur or are unlikely to occur but were Tier 1A and 1B species listed in AGFD (2022a, 2022b), and Arizona Native Plant Law-protected species listed in AGFD (2022a, 2022b). SGCN Tier 1C status is noted for those BCCs included in the table, if relevant. Notes regarding nearest species records are from AGFD (2022c) and eBird (2022a). Range or habitat requirement information and potential occurrence justification from Ammerman et al. (2012), AGFD (2022c), Bat Conservation International (2022), Billerman et al. (2022), Brennan (2012), Corman and Wise-Gervais (2005), eBird (2022a), NatureServe (2022), Reid (2006), SEINet (2022), and USFWS (2022g).

* Federal Status Definitions

BCC = Bird of Conservation Concern

State Status Definitions

SGCN = Species of Greatest Conservation Need; species identified by AGFD (2012b) as having conservation priority. Tier 1A species are those categorized by AGFD (2012b) as "highest priority vulnerable" species. Tier 1B species are those categorized as "vulnerable" but not fitting the Tier 1A criteria for highest priority. Tier 1C species are those for which existing data were insufficient to score one or more vulnerability criteria.

3.1.5.2.1 Species of Greatest Conservation Need

Twenty-one species categorized as SGCN 1A or 1B may occur or are known to occur within the project area or gen-tie (see Tables 5 and 6), including 10 mammals, 9 birds, 1 amphibian, and 1 reptile. Seven of these species are known to occur, having been documented during preconstruction wildlife surveys in the project area—1A species: bald eagle, golden eagle, peregrine falcon (*Falco peregrinus*); 1B species: common nighthawk (*Chordeiles minor*), ferruginous hawk (*Buteo regalis*), pinyon jay (*Gymnorhinus cyanocephalus*), and pronghorn.

3.1.5.2.2 Birds of Conservation Concern

Twelve BCCs may occur or are known to occur within the project area or gen-tie (see Table 6). Three are known to occur, having been documented during preconstruction wildlife surveys in the project area: Bendire's thrasher (*Toxostoma bendirei*), broad-tailed hummingbird (*Selasphorus platycercus*), and pinyon jay.

3.1.6 *Plant Communities of Concern*

The project area is either clearly beyond the known geographic or elevational range of federally listed plant species or it does not contain habitat conditions known to support these species, or both (see Section 3.1.5). Peebles Navajo cactus (federally endangered, ANPL Highly Safeguarded native plant) could be present along the northern extreme of the gen-tie, adjacent to the Little Colorado River; however, the area appears to lack appropriate soil conditions (based on NRCS [2019] soil mapping efforts) and is outside of (south of) the known species' occurrences (see Section 3.5.1.1.1).

As observed during the January 27, 2022, site visit, and during preconstruction wildlife surveys, other protected native plants classified by the ANPL are known to occur in the project area including banana yucca, grama-grass cactus, kingcup cactus, plains prickly pear, tulip pricklypear, and Whipple cholla, which are Salvage Restricted native plants. Others may occur (see, for example, Table 6). Tamarisk, a Class C noxious weed, was observed at the Little Colorado River bridge crossing, approximately 1 mile west of the gen-tie terminus and appears to be present where the gen-tie would span the river (Google Earth aerial imagery).

3.1.7 *Critical Habitats*

There are no critical habitats within the project area or gen-tie. The nearest critical habitat—for Little Colorado spinedace—is Chevelon Creek, 4.5 miles north-northwest of the project area and 6 miles northwest of the gen-tie (Figure 9).

3.2 Other Special Area Designations

There are no IBAs (Audubon 2022), WHSRN sites (WHSRN 2019), Wetlands of International Importance (Ramsar sites) (Ramsar 2014), National Wildlife Refuges (USFWS 2022d), Wilderness Areas (AGFD 2022c), Wild and Scenic Rivers (National Wild and Scenic Rivers System 2022), National Trails (National Park Service 2022), BLM Areas of Critical Environmental Concern (ACECs) (BLM 1989), tribal lands (AGFD 2022c), or state parks (Arizona State Parks 2022) within the project area or gen-tie. Of these special designation areas, the Tanner Wash ACEC is located within 10 miles of the project area (1 mile northeast of the gen-tie) (see Figure 9). This ACEC was designated in 1989; it is managed to protect and promote recovery of the Peebles Navajo cactus (BLM 1988).

Other nearby special designation areas include Homolovi State Park, located 18 miles northwest of the project area (and gen-tie); Petrified Forest National Wilderness Area, 29 miles to the east of the project area (27 miles east-southeast of the gen-tie); and the Mogollon Rim Snow Melt Draw IBA, located 31 miles southwest of the project area (27 miles southwest of the gen-tie). Nearest tribal lands (Navajo Nation) are 21 miles north of the project area (12 miles north of the gen-tie).

Presence of wildlife corridors are described below (see Section 3.3.1).

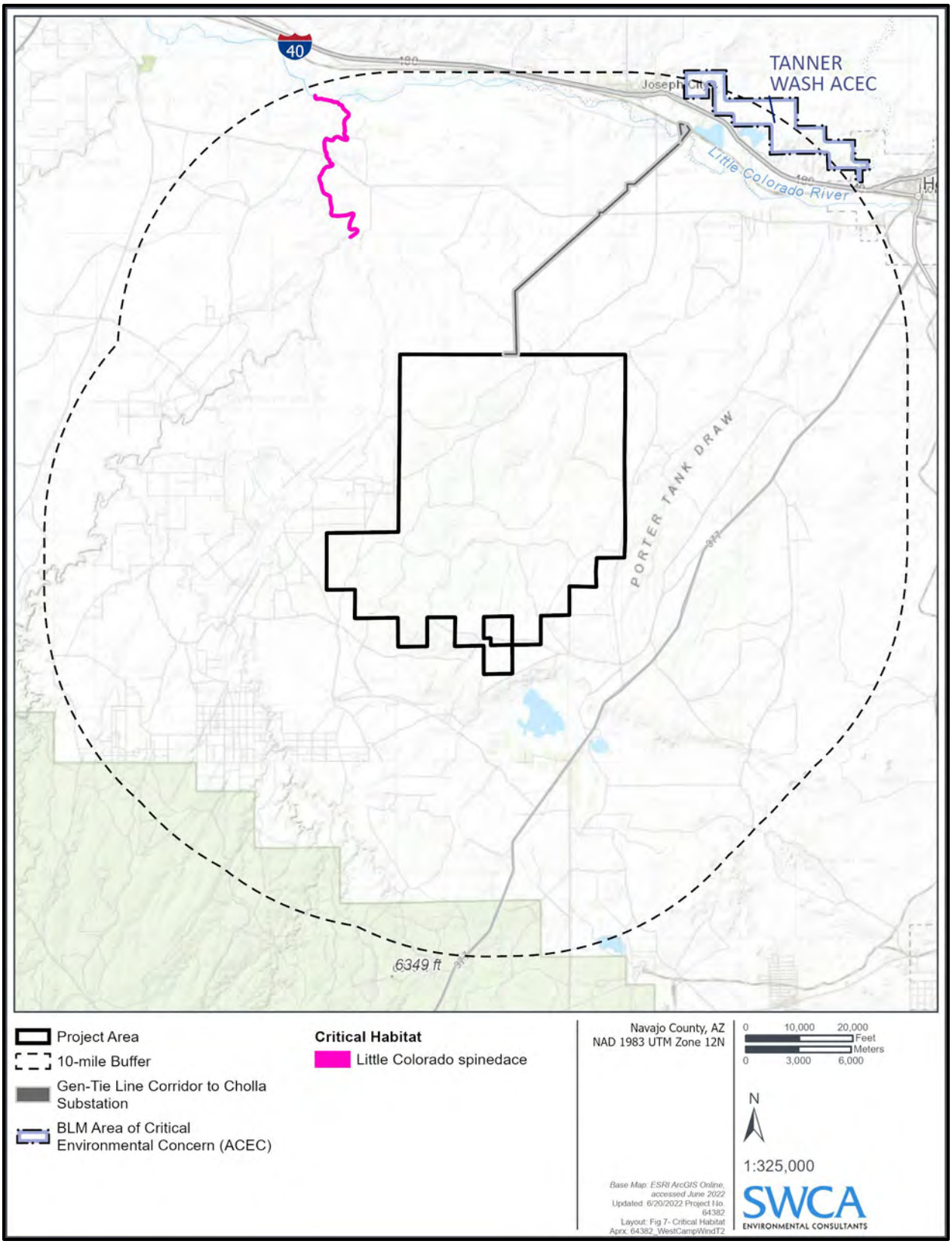

Figure 9. Special designation areas within 10 miles of the project.

3.3 Areas of Wildlife Congregation/Importance

3.3.1 *Wildlife Corridors/Unfragmented Habitats*

In Arizona, the AWLW (2006) identified habitat blocks (areas determined to be important wildlife habitats expected to remain wild) and potential wildlife linkage zones (areas determined to be critical to wildlife movement). County-level stakeholder workshops (e.g., Apache and Navajo Counties workshops held in 2010 and 2011 in Pinetop) and associated assessments (AGFD 2013) later identified linkages at a finer scale that may have been overlooked by the AWLW effort. The county-level assessments categorized wildlife linkages into four categories: diffuse movement areas, where animals move within a habitat block across a broad area rather than through a well-defined linkage; crossing areas, where animals move across barriers, such as major roads; landscape movement areas, where animals move between habitat blocks across a broad area or through a well-defined linkage; and riparian movement areas, where terrestrial and aquatic animals move along riparian or xeroriparian habitats. A subset of priority areas highlighted in the AWLW (2006) assessment, and the county-level assessments have also been developed into detailed modeled corridors (i.e., Arizona missing linkages) (AGFD 2022c; CorridorDesign 2013). These linkage designs identify multi-species corridors between blocks, as well as connectivity associated with certain planning and road mitigation measures. A statewide wildlife connectivity assessment (Perkl 2013), which identified Important Connectivity Zones (ICZs)—general areas throughout the landscape that contribute the most to permeability of the whole landscape—was also completed and meant to complement the AWLW and county-level assessments. These habitat blocks and linkages represent approximate locations of wildlife movements on the landscape and can serve to inform early project planning.

The project area and gen-tie are within the multi-species Mogollon Rim/Navajo Nation potential linkage zone, as identified by AWLW (2006) (Figure 10). A habitat block has also been identified within 10 miles of the project area; approximately 9 miles to the southwest (Apache-Sitgreaves National Forests) (see Figure 10). Portions of the project area and gen-tie are within a county-level assessment diffuse movement area, which has been identified as important for pronghorn (AGFD 2013, 2022c) (Figure 11). A multi-species riparian movement area has also been identified where the gen-tie would cross the Little Colorado River (AGFD 2013, 2022c) (Figure 11). ICZs also bisect the project area and gen-tie (AGFD 2022a, 2022b, 2022c) (see Figure 11). The nearest linkage design (Munds Mountain – Black Hills Linkage Design) is located 70 miles west of the project area.

The WAFWA (2020) CHAT, which measures crucial habitats using a six-level prioritization scheme (1 = "most crucial," 6 = "least crucial"), based on an aggregate of data layers incorporating such layers as unfragmented habitats and wildlife corridors, indicates that the majority of the project area and gen-tie is classified as level 4, with small areas of the western and southwestern portions of the project area classified as level 3, and where the gen-tie would cross the Little Colorado River classified as level 2 (Figure 12). AGFD (2012b, 2022b) also categorizes unfragmented areas in the state based on wildlife movement barriers, vegetation diversity, and importance (relative to its occurrence in the state) of the vegetation community. The project area is within an area considered to have moderate to high value.

Habitat fragmentation is of particular concern for species requiring large habitat blocks for activities such as breeding, foraging, and sheltering. Arizona's SWAP (AGFD 2012b) identifies species for which fragmentation has resulted in isolated populations. Among those species evaluated in Section 3.1.5 that may or are known to occur within the project area or gen-tie, six have been identified by AGFD (2012b) as species of habitat fragmentation concern: bald eagle, ferruginous hawk (*Buteo regalis*), Gunnison's prairie dog (*Cynomys gunnisoni*), kit fox (*Vulpes macrotis*), pronghorn (*Antilocapra americana*), and yellow warbler (*Setophaga petechia*).

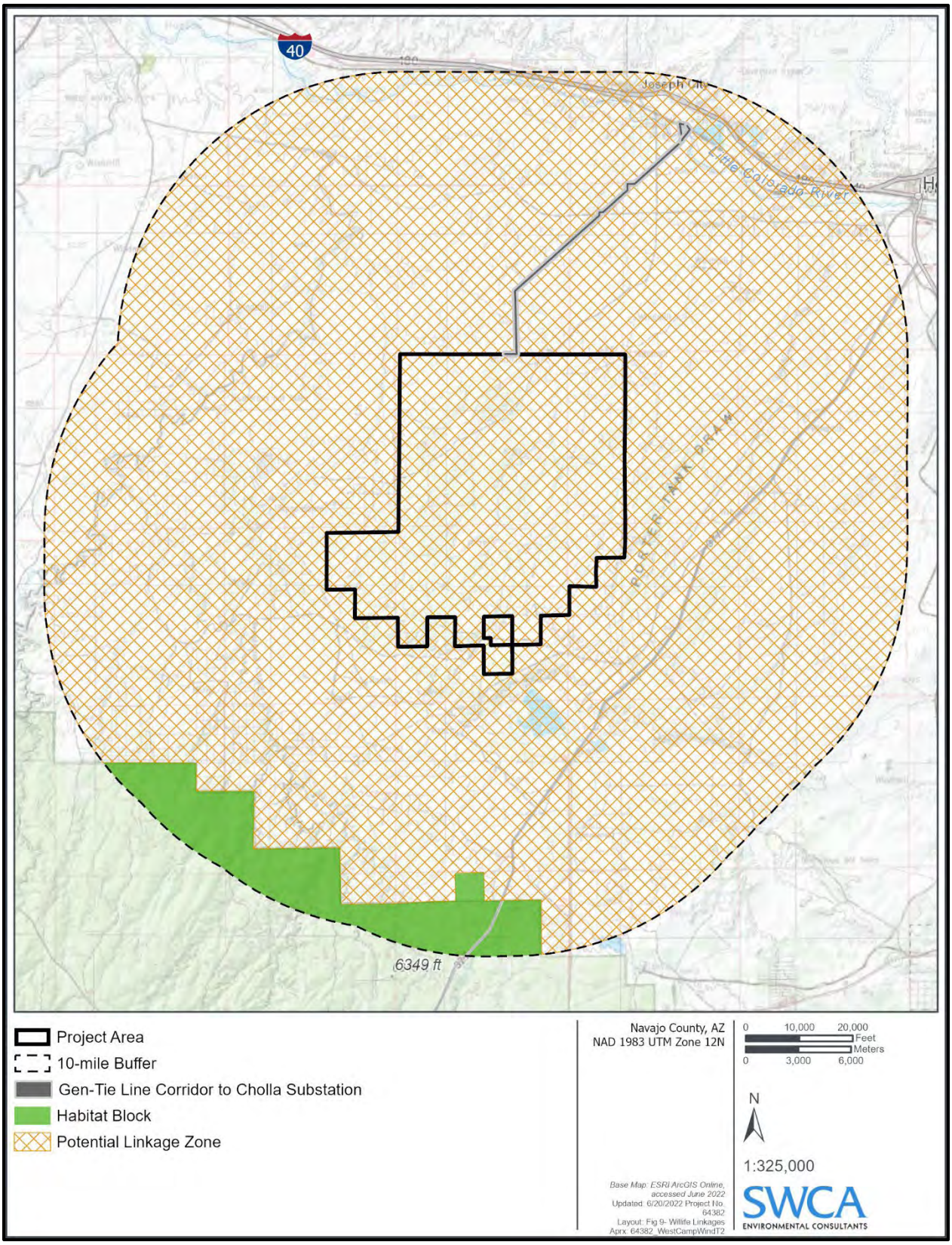

Figure 10. Potential important wildlife linkage zones and habitat blocks within 10 miles of the project area.

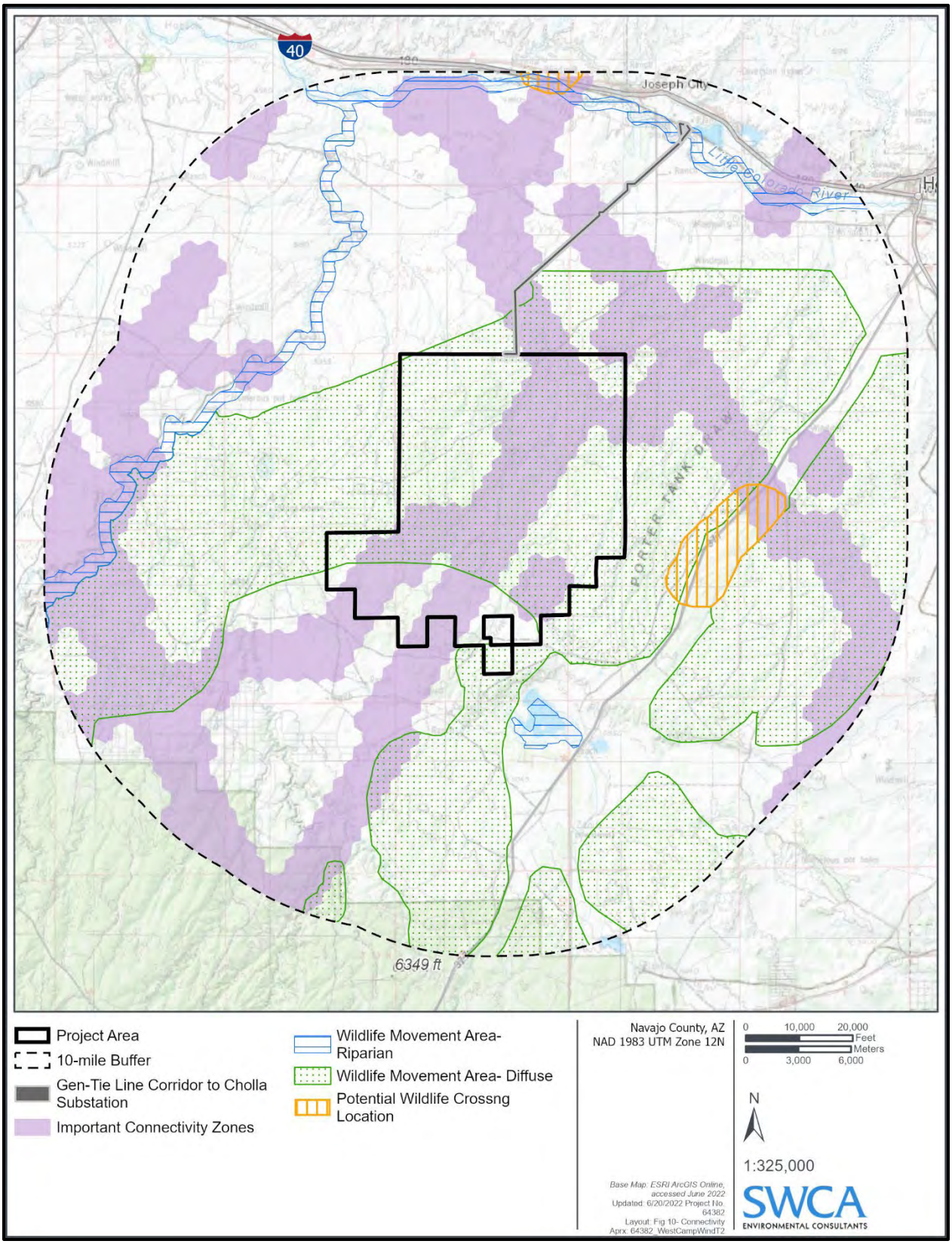

Figure 11. Arizona Important Connectivity Zones and county-level assessment linkages within 10 miles of the project area.

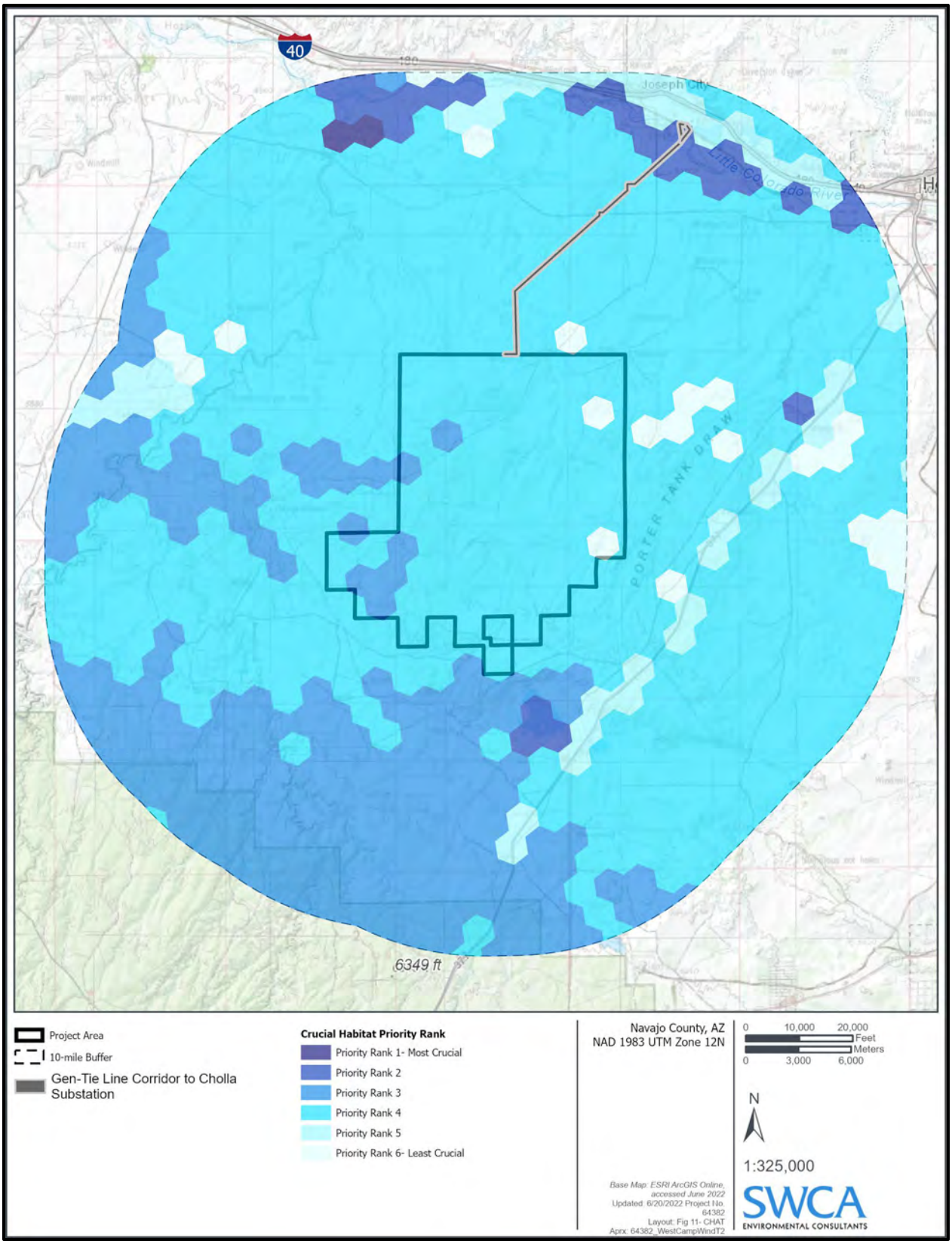

Figure 12. CHAT crucial habitats within 10 miles of the project area.

3.3.2 *Areas of Seasonal Importance*

3.3.2.1 BAT ROOSTS, ROOSTING HABITAT, HIBERNACULA, MIGRATORY ROUTES, AND STOPOVERS

Bat roosting sites may vary by species, season, and time of day (e.g., day—roosts used for rest and raising young; night—roosts used for ingesting food, resting, and avoiding inclement weather or predators). Bats roost singly, in small groups, or in large numbers in naturally occurring and human-made structures including caves, rock crevices, birds' nests, most parts of trees (e.g., inside cavities or hollow logs, under loose bark, inside furled leaves, on branches), mines, buildings, bridges, and culverts (Ammerman et al. 2012). Many bats raise their young in spring-season nursery or maternity roosts; site fidelity at these sites is highly variable (Ammerman et al. 2012; Lewis 1995). Hibernacula sites—commonly caves and abandoned mines—are typically restricted to those with relatively stable temperatures and relative humidity (Ammerman et al. 2012).

There are no known bat colonies within 10 miles of the project area; however, this may be because of a lack of surveys rather than a lack of presence. The nearest known bat colony is 11 miles to the northeast, north of the Little Colorado River near Holbrook (AGFD 2022d). Within the general region, there are multiple capture records for migratory tree bats, including hoary bat (*Lasiurus cinereus*) and silver-haired bat (*Lasionycteris noctivagans*), and free-tailed bats, including Brazilian free-tailed bat (*Tadarida brasiliensis*) and big free-tailed bat (*Nyctinomops macrotis*), which have been discovered as fatalities at the nearby[5] Dry Lake I and II wind energy facility (personal communication, Angie McIntire, AGFD Bat Specialist, with Allen Graber, Ecologist, SWCA, November 13, 2018). As part of the May 18, 2022, wildlife agency coordination meeting for the project, AGFD raised concern for turbine collision risk to high-flying bats (e.g., big free-tailed bat and greater bonneted bat [*Eumops perotis*]), particularly in reference to technological advances that increase turbine heights and rotor-swept areas being implemented at contemporary sites. While few published studies have shown contradictory findings regarding the effects of increased turbine height on fatality rates of birds, bat fatalities have shown a positive correlation with tower height (Allison et al. 2019). However, further analysis of this relationship, particularly with larger datasets, is needed (Allison et al. 2019).

Migratory routes or stopover areas for bats in the region have not been identified; predicting such areas remains tenuous (AGFD 2012a; Baerwald and Barclay 2011; Baerwald et al. 2009; Bennett and Hale 2018; Fleming and Eby 2003; Froidevaux et al. 2014). Though edge habitats and water sources are generally recognized as important habitats for certain commuting or foraging bats (Bennett and Hale 2018; Jantzen and Fenton 2013), studies have not demonstrated a clear relationship between perceived resources or pre-construction bat activity and bat fatalities at wind facilities (Bennett and Hale 2018; Solick et al. 2020). Wind energy facility siting decisions have focused on identifying important resources for bats such as hibernacula and maternity colonies and potential movement corridors (direct routes) between these important sites and quality foraging habitat patches (Arnett and Baerwald 2013; Bennett and Hale 2018; Hein et al. 2013).

3.3.2.2 BIRD STAGING AREAS, STOPOVERS, AND MIGRATION CORRIDORS

The proposed wind development area does not contain bird staging areas, stopovers, or migration concentration sites defined as follows:

- *Staging areas* are those with abundant, predictable food resources where birds prepare for an energetic challenge (typically a long flight over a geographic barrier) requiring substantial

[5] The Dry Lake I and II wind energy facility is located approximately 5 miles southeast of the project area.

food stores (Warnock 2010). Such staging areas are seen for birds such as waterfowl, cranes, shorebirds, and songbirds. Examples of staging sites include Delaware Bay, Delaware and New Jersey; Copper River Delta, Alaska; Platte and North Platte Rivers, Nebraska; Mono Lake, California; Great Salt Lake, Utah; and the Yucatan peninsula. Some smaller, lesser-known interior sites that do not meet WHSRN numeric criteria but provide consistent water availability and quality may also be important to some shorebird species that migrate in small flocks (Robinson and Warnock 1996).

- The terms *stopover* and *staging area* are often used interchangeably. Stopover sites may be defined more broadly as sites where birds rest and feed during migration to refuel or avoid adverse conditions (Warnock 2010). Though most species migrate on broad fronts and stopover strategies among and within species are complex, fragments of forested areas and riparian corridors (i.e., oases relative to the surrounding landscape) often provide important stopover habitats. Migration "hotspots" are mapped by eBird (2022b).
- Raptor *migration concentration sites* are associated with negative barriers, such as large bodies of water, or mountain ridges that offer energy-efficient flight via updrafts.

Within the project area and gen-tie, the grassland, juniper savanna, and pinyon-juniper habitats are abundant habitats relative to the surrounding region. The seasonally inundated earthen stock tanks and check dams which are located sparsely in the project area, are small, and except for one of the check dams, devoid of emergent vegetation. These wetland features would not concentrate large numbers of migrating shorebirds or waterfowl. The Little Colorado River, where the northern end of the gen-tie would span the river, may provide limited stopover riparian habitats (patchy tamarisk) for migrant birds. The river and shallow canyons within and proximal to the project area would not concentrate migrant raptors relative to known migration concentration sites. These features are also unlikely to act as a conduit for resident and/or migrant raptor use relative to more prominent topographic features in the region.

Nearby Chevelon Creek (4 miles northwest of the project area), Dry Lake (1.5 miles south of the project area), and Cholla Lake (near the gen-tie's northern terminus) may provide stopover habitats for migrant birds. Chevelon Canyon may also act as a conduit for resident and/or migrant raptor use.

The nearest known migration "hotspots" (eBird 2020b) are Cholla Lake and agricultural fields just adjacent to (south of) Dry Lake. Other nearby hotspots include the Hidden Cove Golf Course and adjacent water treatment plant in Holbrook approximately 11 miles northeast of the project area (6 miles east of the gen-tie), the Joseph City Water Treatment approximately 9 miles north of the project area (3 miles west of the gen-tie), and McHood Park (Clear Creek Reservoir) approximately 14 miles northwest of the project area (and gen-tie).

The nearest known raptor migration concentration sites are in the Grand Canyon (Lipan and Yaki Points) located approximately 115 miles northwest of the project area and gen-tie (Hawk Migration Association of North America 2022). The project area and gen-tie are also outside of known avian species-specific migration corridors (e.g., sandhill crane [*Antigone canadensis*] flyways) (Pacific Flyway Council and Central Flyway Council 2016; Pacific Flyway Council 2017).

3.3.2.3 LEKS

The project is not within the range of any lekking species (e.g., grouse, sage-grouse, prairie chicken; Galliformes>Phasianidae>Tetraoninae), which are species that form seasonal aggregations characterized by male display.

3.3.2.4 WINTER RANGES

For winter flocking species such as waterfowl, sandhill cranes, and select small birds (e.g., pinyon jays and horned larks), AGFD (2012b) highlights the importance of grassland and pinyon/juniper woodlands, particularly where they are near open bodies of water.

Within the project area, the seasonally inundated stock tanks and check dams may generally concentrate certain small birds (e.g., pinyon jays and horned larks). Because of their size, these features would not concentrate large numbers of wintering waterfowl. They may generally be used by small groups of these species, and, as a result, provide limited foraging resources for eagles (see Section 3.4).

Nearest wintering areas for sandhill cranes are far from the site (180 miles to the south [Willcox Playa, Arizona] and 180 miles to the southwest [Gila Bend] (Pacific Flyway Council and Central Flyway Council 2016; Pacific Flyway Council 2017).

Nearby Dry Lake (1.5 miles south of the project area) and Cholla Lake (near the gen-tie's northern terminus) may concentrate wintering waterfowl.

3.3.2.5 BIG GAME HUNTING, BREEDING, AND CALVING SEASONS

The project area and gen-tie are within AGFD Game Management Unit 4B. Primary game species and hunting months in the unit are pronghorn in August and September, mule deer (*Odocoileus hemionus*) in August and November, and elk (*Cervus elaphus*) from September to December (AGFD 2022e).

Breeding and fawning in pronghorn occur from August–September and May–June, respectively (AGFD 2022f). Important seasonal periods for elk include breeding (September–October), restoring depleted body fat (November), and calving (late May and June) (AGFD 2022f; New Mexico Department of Game and Fish 2018). Mule deer breed in the winter (November–December) and birth young from June–August (AGFD 2022f).

During the May 18, 2022, coordination meeting, the AGFD raised potential concern over potential impacts to pronghorn fawning (mid-May to mid-June) during the project's construction phase. This population, though apparently stable (AGFD 2022e), is bounded by Chevelon Canyon and Highway 377, a 17-mile-wide span, within which the project area is approximately 9 miles across. Pronghorn primarily use openings in the pinyon-juniper and desert grassland habitats in the region (AGFD 2022e), seeking areas with greater than average shrub cover and height for fawning (Howard 1995). Little is known on the effect of wind energy development on ungulates, including pronghorn reproductive success. Responses of ungulates to other forms of energy development, including oil and gas, have generally been overwhelmingly negative, including decreased reproductive success, or altered behavior and displacement (Sawyer et al. 2017, 2019). Milligan et al. (2021), one of the few studies of pronghorn interactions with wind energy development, did not find consistent negative effects to pronghorn space use and habitat selection, generally concluding that wind energy development may have less severe and more intermittent effects on the species than oil and gas development has had on other ungulates. However, the study did find a trend toward increased displacement over time, and behavioral avoidance by some individuals during construction of turbines, associated with increased human presence.

3.3.2.6 BIRD NESTING SITES

3.3.2.6.1 Raptor Nests

Year 1 raptor nest inventory and occupancy surveys were conducted by SWCA on February 23 (Survey 1) and March 27 and 28, 2021 (Survey 2). The timing aligned with golden eagle peak laying

(Survey 1) and early hatching (Survey 2) dates, as reported by McCarty et al. (2021). Survey 1 included a habitat-focused golden eagle nest inventory and occupancy survey within 2 miles of the project area. Survey 2 included golden eagle nest occupancy revisits within the 2-mile survey area, and a transect-based survey for non-eagle raptor nests and common raven (*Corvus corax*) within the project area. Methods and results are presented in *Eagle and Other Raptor Species Nest Surveys for the Proposed West Camp Wind Farm 2021 Nesting Season* (SWCA 2021). Survey preparation included 1) delineating potentially suitable golden eagle nesting habitats (i.e., rugged terrain, rock faces, large trees and snags, and transmission towers) within the 2-mile survey area, and 2) acquiring AGFD's previously identified golden eagle breeding areas (4 × 4–mile areas)— where eagle nests or large eagle-size nest structures have been identified during past survey efforts—within 5 miles of the project area.

SWCA delineated 4,118 acres of possible golden eagle nesting habitats within the 113,890-acre 2-mile survey area. Specific habitat features include transmission towers located in the northwestern portion of the survey area and relatively shallow canyons (e.g., Bell Cow Canyon, Porter Tank Draw, and Lost Canyon) in the northwestern, central, and southeastern portions of the survey area. For this site characterization report, we also delineated possible golden eagle nesting habitats—an additional 38,048 acres—within 2 to 10 miles of the site (Figure 13). In this larger area, the majority of possible habitats are rock faces associated within Chevelon Canyon (4–10 miles northwest and west of the project area) and Black Canyon and Brookbank Canyon (approximately 8 miles to the southwest).

Bald eagle nesting habitats (i.e., large trees, snags, and cliffs < 2 kilometers [1.2 miles] from fish-bearing waters) are not present; however, the Year 1 surveyors kept an eye out for bald eagle nests within the possible golden eagle nesting habitats delineated in the 2-mile survey area.

Figure 13 illustrates two previously identified golden eagle breeding areas provided by AGFD: Chevelon Rock (a known breeding area, 5 miles northwest of the project area) and Porter Tank (a possible breeding area [i.e., containing a large eagle-sized nest structure], 2.5 miles east of the project area) (see Figure 13). Figures 13 and 14 present the eagle, possible eagle, and non-eagle raptor and raven nests recorded during the 2021 surveys (see SWCA [2021] for additional detail]).

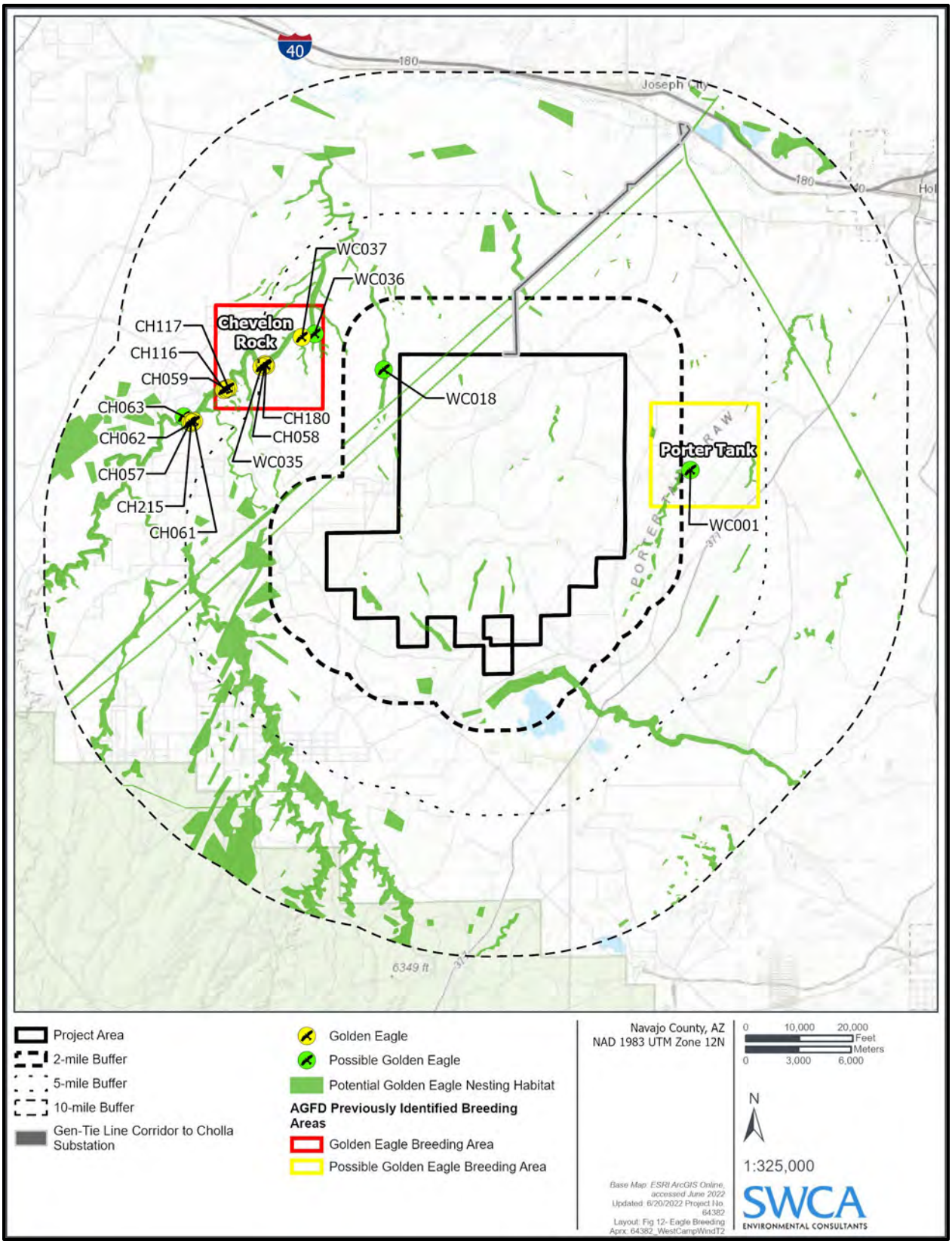

Figure 13. Eagle and possible eagle breeding areas previously identified by the AGFD, and possible eagle nesting habitats mapped by SWCA.

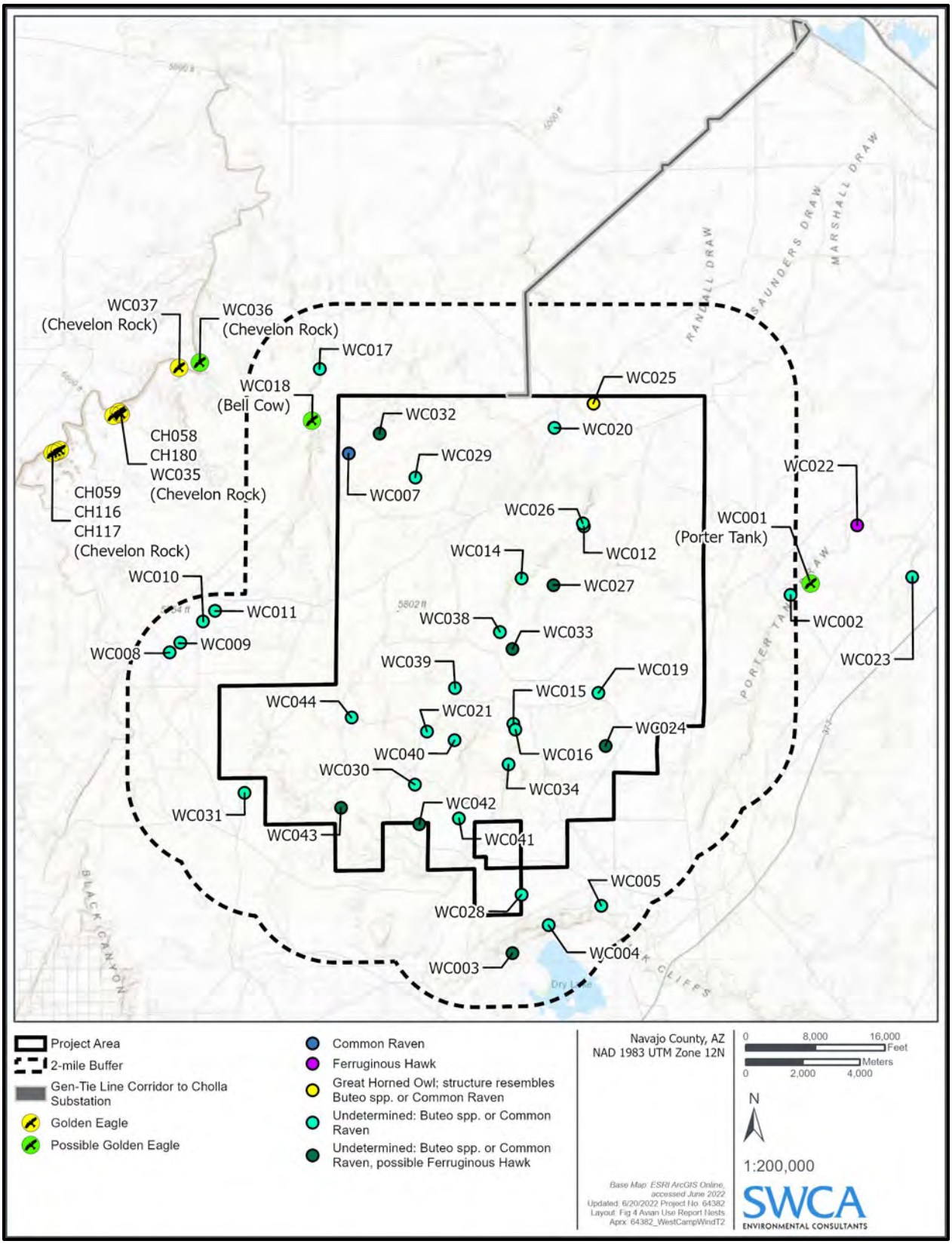

Figure 14. Nest survey results, 2021.

3.3.2.6.2 Other Migratory Bird Treaty Act Species' Nests

Other MBTA-protected species may nest in the site's grassland, shrub, treed, and cliff habitats. Table 6 provides information on which special-status birds may occur and nest within the site (12 species).

3.4 Potential Eagle Use of the Site

3.4.1 *Anticipated Seasonal Use*

The project area and gen-tie are within the golden eagle's year-round range and contain appropriate foraging (i.e., open grassland and steppe-like vegetation communities; Katzner et al. 2020) and marginally suitable nesting habitats.

Golden eagles exhibit complex migration and nomadic movement patterns dependent on factors such as nesting status, age, and food availability (Katzner et al. 2020). Because individuals from areas north of Arizona winter in the state from October through April (reaching peak numbers from December–February), generally, more golden eagles may be expected regionally during the fall through early spring seasons (AGFD 2022d; Katzner et al. 2020). Other factors that may influence temporal use of the site by the species include whether breeding areas proximal to the site (see Section 3.3.2.6; see Figure 13) are used by individuals during the breeding season (winter through early summer) and the extent to which foraging activities increase on-site based on seasonal fluctuations in food availability (e.g., offal piles left by hunters August through December; see Section 3.4.2.1).

The project area and gen-tie are within the bald eagle's non-breeding and limited breeding ranges and may provide secondary foraging resources (see Section 3.4.2.2).

Like golden eagles, bald eagles exhibit complex migration and nomadic movements; generally, more individuals may be expected regionally from late August through February, when wintering northern birds and returning juveniles are present (Corman and Wise-Gervais 2005). Given the lack of bald eagle nesting, roosting, and foraging habitats within the site, use of the site by the species would most likely be occasional, particularly from late summer through winter when appropriate food items (e.g., large mammal carrion; see Section 3.4.2.2) are present.

3.4.2 *Eagle Prey Concentrations*

3.4.2.1 GOLDEN EAGLE PREY ITEMS

Potential golden eagle main prey items within the project site may include rabbits (e.g., desert cottontail [*Sylvilagus audubonii*], black-tailed jackrabbit [*Lepus californicus*]) and sciurids (e.g., rock squirrel [*Otospermophilus variegatus*]). Secondary prey items may include large mammal carrion (e.g., cattle, elk, pronghorn, mule deer), live ungulates (e.g., pronghorn), cattle, mesocarnivores (e.g., coyote [*Canis latrans*], American badger [*Taxidea taxus*], bobcat [*Lynx rufus*]), large birds, and offal piles left by hunters (Katzner et al. 2020).

No Gunnison's prairie dogs, a favored, spatially predictable, and reliable prey item, or their burrows, have been detected on-site during preconstruction wildlife surveys (October 2019–November 2021) or during the January 27, 2022, site reconnaissance visit. Potential prey concentration areas include stock tanks and check dams, which are small, ephemeral features that may attract small numbers of waterfowl, and therefore, a limited source of prey, particularly from October–February (wintering waterfowl season).

3.4.2.2 BALD EAGLE PREY ITEMS

Secondary bald eagle prey items on-site may include carrion, especially in winter, birds (e.g., waterfowl), and terrestrial mammals (e.g., rabbits) (Buehler 2000); however, the species seeks out aquatic foraging habitats and prefers fish. Chevelon Creek (4 miles northwest of the project area and gen-tie) may provide appropriate preferred foraging conditions. Other major bodies of water and their proximity to the site are described above (see Section 3.1.4).

3.4.2.3 BALD EAGLE ROOSTING SITES

Bald eagle roost sites are not known or expected to occur within 10 miles of the project area or gen-tie (see Section 3.1.5.1.1).

3.4.3 *Important Eagle Use Areas or Migration Concentration Sites*

At this time, no important eagle use areas or migration concentration sites have been identified within or immediately adjacent to the project area or gen-tie.

Chevelon Canyon (4 miles northwest of the project area and gen-tie) may act as a conduit for resident or migrant eagles or non-eagle raptor movement but does not exhibit characteristics of a concentration site (e.g., mountain ridges, prominent north-south topography).

An *important eagle use area* is defined by the USFWS (2009) as "an eagle nest, foraging area, or communal roost site that eagles rely on for breeding, sheltering, or feeding, and the landscape features surrounding such nest, foraging area, or roost site that are essential for the continued viability of the site for breeding, feeding, or sheltering eagles." The term refers to specific areas within a broader landscape where eagles are more likely to be disturbed by an activity because of the higher probability of interference with breeding, feeding, or sheltering behaviors. In practice, important eagle use areas are defined by buffering occupied eagle nests within an appropriate avoidance setback and documenting concentrated use within a site (i.e., overlapping eagle flight paths).

Important golden eagle use areas are known within 10 miles of the project area and gen-tie, the nearest being the Chevelon Rock breeding area, 5 miles to the northwest (see Figures 13 and 14). Whether important golden eagle use areas exist closer to the project area will continue to be evaluated as eagle flight paths from the October 2019—September 2021 avian surveys are evaluated, and additional nest surveys take place in 2023. Nearby potential golden eagle nest sites, WC001 and WC018 (2.3 miles east and 0.5-mile northwest of the project area, respectively; see Figure 14), will be reassessed for activity and species' diagnostic characteristics during the 2023 breeding season. Overlapping golden eagle flight paths, if present, will be presented in a future avian survey report. Comprehensive identification and avoidance strategies of such areas will be accomplished through the tiered decision-making process.

There are no known communal eagle roost sites—generally associated with bald eagles—within or proximal to the project area.

3.4.4 *Summary of Potential Areas of Wildlife Congregation/ Seasonal Importance*

Macro- and micro-siting of a wind energy facility (and related infrastructure) may be informed by identifying areas of high conservation value, such as wetlands, spatially predictable food resources, unique or rare natural communities, major avian migratory routes, or critical habitat for endangered species.

Based on our current knowledge of potential wildlife use and habitat conditions, the following is a summary of features within and adjacent to the project area that may attract species of concern:

- Ephemeral stock tanks and check dams used by wintering waterfowl (October–February) may provide limited, concentrated (spatially predictable) prey for eagles. These features may also be used as stopovers for migrating birds and by commuting or foraging bats.
- The Little Colorado River, where the gen-tie would span the river, and nearby Dry Lake, may be used by migrating birds or by commuting or foraging bats.
- Pinyon-juniper/grassland edge habitats, canyon drainages, and sinkholes within the project area may be used by commuting or foraging bats.
- At the northern terminus of the gen-tie, mixed alluvium soils belonging to the Gypsiorthids-Torriorthents Association may support Peebles Navajo cactus. These soils are further described as weakly alkaline, Little Colorado paleochannel gravel deposits, eroding from or "uncomfortably on top of" underlying Shinarump conglomerate of the Chinle formation.
- Milkweed plants within the project area may be used by breeding or migrating monarch butterflies, particularly for nectar resources June–September.

3.5 Eagle Conservation Plan Guidance Site Categorization at This Stage

Because eagle risk site categorization is determined through an iterative process—informed by proximity of the project's footprint to important eagle-use areas (ECPG Stages 1, 2, and 4) and project-specific annual eagle fatality estimates as they pertain to the LAP size (ECPG Stages 2–4)—categorization at this stage is preliminary (USFWS 2013). Initial evidence at this stage indicates that the proposed project is a Category 2 site—meaning there is high or moderate risk to eagles with opportunity to mitigate impacts. This preliminary evidence includes the following:

- No eagle migration concentration sites are known within the project area or its vicinity.
- Known golden eagle nesting areas are present within 10 miles of the project area but not within the project's footprint. Additional surveys will take place in 2023.
- Other important eagle-use areas (i.e., concentrated flight paths) are not known but will be evaluated in a future survey report. Opportunities to avoid these areas, if present, will be evaluated through the tiered decision-making process.

3.6 Framework for Determining Bat and Bird Study Effort

USFWS (2016) codified specific minimum standards for eagle use surveys, including that the surveys should be conducted for 2 years for applicants seeking an incidental eagle take permit. USFWS (2013) similarly recommends that occupancy surveys of eagle nests be conducted for two breeding seasons. AGFD (2012a) recommends preconstruction wildlife surveys be conducted for 1 to 3 years based on certain criteria (e.g., presence of certain habitat associations and special area designations, information from nearby operational wind farms) used to inform anticipated impacts to wildlife (see Section 2.5). This project falls within Category 1–3 criteria, meaning there is opportunity to avoid, minimize, or mitigate potential impacts to wildlife, and 1 to 2 years of study is recommended.

AES is committed to conducting two full years of avian and bat surveys prior to construction. These surveys have taken place from October 2019–November 2021 and will continue in 2023 (SWCA 2022).

4 KEY FINDINGS AND NEXT STEPS

4.1 Answers to Tiers 1 and 2 Questions

The following is a summary of the answers to USFWS's (2012, 2013) and AGFD's (2012a) site characterization questions (see Section 1):

- Thirty-six special-status wildlife and plant species may occur within the project area or gen-tie, of which three are federally protected: the endangered (and ANPL Highly Safeguarded native plant) Peebles Navajo cactus, and both eagle species. A fourth, monarch butterfly, is a candidate species, for which there are no statutory protections under the ESA, but USFWS encourages opportunities to conserve the species.
- The Peebles Navajo cactus may exist at the northern terminus of the gen-tie, adjacent to the Little Colorado River. However, appropriate soil conditions do not appear to be present (based on mapped soil layers), and known species occurrences are north of U.S. Route 40 (north of the gen-tie). Additional ANPL-protected Salvage Restricted plants are known to occur within the project area (e.g., banana yucca, grama-grass cactus, plains pricklypear, and Whipple cholla).
- Critical habitat for the Little Colorado spinedace and a BLM ACEC—managed to protect and promote recovery of the Peebles Navajo cactus—is present within 10 miles but not within the project area or gen-tie. No other special area designations are present.
- The project area and gen-tie are generally considered to have moderate to high value with respect to unfragmented habitats evaluated statewide. Areas representing approximate wildlife movements on the landscape—including a potential wildlife linkage zone, county-level wildlife movement areas, and ICZs—are defined within the project area and bisecting the gen-tie. Among species that may or are known to occur within the project area or gen-tie, AGFD's SWAP (AGFD 2012b) identifies six species of habitat fragmentation concern: bald eagle, ferruginous hawk, Gunnison's prairie dog, kit fox, pronghorn, and yellow warbler. Of these six species, AGFD has raised specific concern over potential impacts of project construction activities to pronghorn fawning (mid-May to mid-June).
- There are no known *critical* areas of wildlife congregation. Areas of seasonal importance and that may attract wildlife, generally, relative to the surrounding landscape include the following:
    - Project area stock tanks and check dams that may support limited wintering (October–February) waterfowl use and, therefore, limited, concentrated (spatially predictable) prey for eagles. Commuting or foraging bats and migrating birds may generally use these features, as well as the Little Colorado River corridor, where the gen-tie would span the river.
    - Pinyon-juniper/grassland edge habitats and canyon drainages within the project area may be used by commuting or foraging bats.
    - Milkweed plants within the project area may be used by breeding or migrating monarch butterflies, particularly for nectar resources June–September.
    - Hunting would occur primarily from August through December (elk: September–December; mule deer: August and November; pronghorn: August and September).
- No important eagle use areas or migration concentration sites have been identified within 2 miles of the project area. However, a possible eagle nest is located 0.5 mile northwest of the project area, and whether concentrated eagle flight paths are present within the project area will be evaluated during future preconstruction surveys and reporting.

- With respect to USFWS's (2013) eagle risk site categorization, the site may be preliminarily categorized as a Category 2 site (opportunity to mitigate potential impacts) based on the lack of migration sites within or near the project, the fact that known nesting sites are within 10 miles of the project area but outside the project footprint, and the fact that other important use areas, if discovered during future surveys and reporting, may be avoided. With respect to AGFD's (2012a) *Framework for Determining Bat and Bird Study Effort*, the site may be categorized as Category 1–3 (opportunity to mitigate potential impacts) based on the habitat associations present and the lack of special designation areas near the site.

The following remains unclear at this stage; clarity will be obtained via additional agency coordination and ongoing site-specific surveys and reporting:

- The extent to which special-status species are present.
- The extent to which important golden eagle use areas (e.g., occupied eagle nests that may be newly discovered in 2023, or concentrated flight paths indicating areas that the species would rely on for breeding, feeding, or sheltering activities) are present within or near the project footprint.
- Location and characterization of other areas of seasonal importance (e.g., bat maternity colonies or hibernacula sites, raptor nests).
- Specific baseline bird and bat species composition and use (temporal and spatial).
- Compensation requirements associated with ANPL-protected species in areas of State lands planned for development.
- Whether there would be significant adverse impacts to special-status species, considering the design of the project.

4.2 Next Steps in the Wildlife Guidelines Tiered Process

As a next step, AES requests an AGFD recommendation letter, which will be used during the County and ACC CEC permitting processes.

AES will continue to follow state and federal wind energy guidelines, including the tiered decision-making process—which aims to identify potential threats to species thought to be at risk:

- This Tiers 1 and 2 site characterization report provides an initial landscape-scale screening and site-level characterization that addresses potential risk the project would pose to species of concern and their habitats.
- Tier 3 site-specific data will provide quantitative and qualitative assessments used to determine 1) whether a project should be developed or abandoned, 2) avoidance and minimization measures, 3) compensatory mitigation measures if adverse impacts cannot acceptably be avoided, and 4) the duration and level of effort of post-construction monitoring. Specific to eagles, the surveys 1) generate Stage 3 predictions of the mean number of annual eagle fatalities, 2) identify important eagle use areas or migration concentration sites that could be affected by the project, and 3) inform the likelihood of disturbance risk. In addition to the avian and bat surveys completed from October 2019–November 2021 (as outlined in the project's wildlife survey plan [SWCA 2022]; and see Section 2.5), additional bat acoustic surveys (March–November) and nest surveys (February and March) are planned in 2023. Survey findings will be provided later in 2022, following the nest survey in 2023, and following the bat acoustic surveys in early 2024.
- Tier 4 post-construction fatality monitoring is designed to estimate collision-related impacts.

- Tier 5 studies are not necessary for most wind energy projects; they are aimed at understanding and adaptively rectifying potentially significant impacts identified in Tier 4.

Table 7 summarizes the project's wildlife survey plan (SWCA 2022) and outcome.

Table 7. Recommended Wildlife Surveys for the Project

Survey Type	Time Frame	Outcome
Avian use surveys. Survey plots were distributed to cover 30% of the project's footprint.	Each plot was surveyed 1 hour per month for 2 years. These surveys were conducted from October 2019–September 2021 at 34 plots.	Surveys will document species composition and patterns of activity of detected birds using the project area. Eagle-specific data will include eagle-minutes (to inform fatality predictions) and flight paths (to document spatial use of the site).
Bat acoustic surveys. Stationary bat acoustic stations with high- and low-microphones.	March–November for 1 year. Three stations (four bat detectors) were deployed in 2021; three stations (4 detectors) will be deployed in 2023.	Surveys will document species composition and patterns of activity of detected bats using the airspace within the project area.
Golden eagle and non-eagle raptor nest surveys. Because potential golden eagle nesting habitats are present, survey for golden eagle nests within 2 miles of the project area (surveys are typically conducted by helicopter) per USFWS (2020a) guidelines. Surveys of non-eagle raptor nests are typically conducted within the project area.	During each of two seasons, conduct 2 surveys to document eagle nest occupancy: Survey 1: mid–late February; Survey 2: mid–late March. Non-eagle raptor nest surveys are conducted during Survey 2 in either year 1 or 2. Eagle and non-eagle raptor nest surveys were conducted in 2021; a follow-up eagle and special-status species raptor nest survey is planned in 2023.	Data may inform siting decisions, ECPG site categorization, and construction compliance focal areas.
Incidental data recorded during other site-specific surveys include locations of eagle prey concentrations (e.g., waterfowl, prairie dog colonies) and presence of special-status species.	During all Tier 3/Stage 2 surveys.	Data may inform siting decisions and construction compliance focal areas.
Inventory native plants on state lands in the project disturbance footprint where the project would be sited on State lands, as needed, per Arizona State Land Department guidelines.*	No specific seasonal timeframe.	Surveys inform in-lieu fees, if required, for protected native plants disturbed by the project. A Notice of Intent to Clear Land Form is required to be sent to Arizona Department of Agriculture 60 days prior to vegetation clearing activities regardless of land ownership.
Peebles Navajo cactus habitat assessment and/or surveys at the northern terminus of the gen-tie, if that gen-tie option is selected.*	Species flowers April–May. Species are notoriously difficult to locate due to their size (2-6.5 x 1.5-5.5 cm). A field-based habitat assessment may be warranted in lieu of species-specific surveys.	Surveys may inform line siting decisions.
Compliance Surveys Immediately Prior to Construction		
If vegetation clearing is expected to occur during the MBTA nesting season, conduct a clearance survey within 48 hours to 1 week prior to vegetation clearing activities. Evaluation area is typically within 30–150 feet (for small birds) and 400 feet to 0.5 mile (for non-eagle raptors) of planned disturbance activities.*	Non-eagle raptor nesting season: February 1–August 15; non-raptor nesting season: March 1–August 31.	Surveys inform avoidance and/or nest management measures. AGFD has not published specific buffering prescription recommendations but may provide guidance; typical avoidance buffers may be found in Colorado Parks and Wildlife (2008), as well as other sources.

* Survey type was not presented in the project's wildlife survey plan (SWCA 2022) because implementation will depend on project design and construction timing considerations.

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APPENDIX A

Official Species and Critical Habitats List for the Project, U.S. Fish and Wildlife Service Information for Planning and Consultation System

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

In Reply Refer To:
Project Code: 2022-0049201
Project Name: West Camp Wind Farm

June 02, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location 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 the One-Range that has been delineated for the species (candidate, proposed, or listed) and it's critical habitat (designated or proposed) with which your project polygon intersects. These range delineations are based on biological metrics, and do not necessarily represent exactly where the species is located. Please refer to the species information found on ECOS to determine if suitable habitat for the species on your list occurs in your project area.

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 determine whether 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, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared 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. An effect exists 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 affects. If the Federal action agency determines that the action may jeopardize a *proposed* species or may 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 that they be considered 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 1,026 species of birds are protected by the MBTA, including the western burrowing owl (*Athene cunicularia hypugaea*). Protected western burrowing owls can be 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, our office should be contacted for Technical Assistance. An evaluation must be performed to determine whether the project is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles (see https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/eagles.php and 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 web site: https://www.fws.gov/birds/management.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/migratorybirds/pdf/management/usfwscommtowerguidance2016update.pdf.

The U.S. Army Corps of Engineers (Corps) may regulate activities that involve streams (including some intermittent streams) and/or wetlands. 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, please visit https://www.fws.gov/southwest/refuges/ to locate the refuge you would be working in or around.

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. For more information, please contact our Tribal Coordinator, John Nystedt, at 928/556-2160 or John_Nystedt@fws.gov.

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/planning/projevalprogram/).

We appreciate your concern for threatened and endangered species. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office. If we may be of further assistance, please contact our Flagstaff office at 928/556-2157 for projects in northern Arizona, our general Phoenix number 602/242-0210 for central Arizona, or 520/670-6144 for projects in southern Arizona.

Sincerely,
/s/

Mark A. Lamb
Acting Field Supervisor
Attachment

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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".

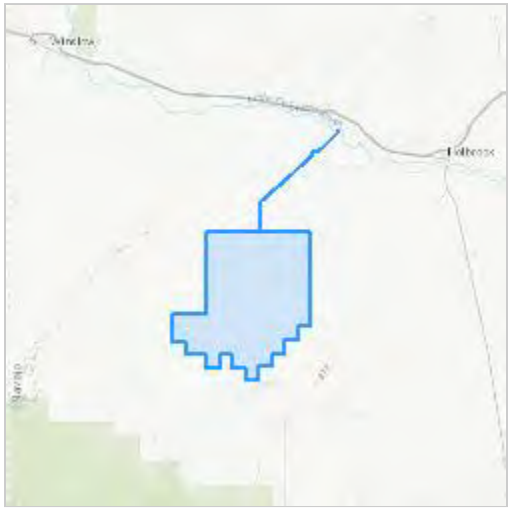
This species list is provided by:

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

Project Summary

Project Code: 2022-0049201
Event Code: None
Project Name: West Camp Wind Farm
Project Type: Department of Energy Operations
Project Description: proposed wind farm and gen-tie south of Joseph City, AZ
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.7390574,-110.4139906629986,14z



Counties: Navajo County, Arizona

Endangered Species Act Species

There is a total of 10 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.

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
Gray Wolf *Canis lupus* Population: Mexican gray wolf, EXPN population No critical habitat has been designated for this species.	Proposed Experimental Population, Non-Essential

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
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
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake *Thamnophis eques megalops* There is **final** critical habitat for this species. The location of the critical habitat is not available. 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. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1516	Threatened

Fishes

NAME	STATUS
Little Colorado Spinedace *Lepidomeda vittata* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6640	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Peebles Navajo Cactus *Pediocactus peeblesianus ssp. peeblesianus*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8245

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Bendire's Thrasher *Toxostoma bendirei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9435	Breeds Mar 15 to Jul 31

NAME	BREEDING SEASON
Cassin's Finch *Carpodacus cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Grace's Warbler *Dendroica graciae* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 20 to Jul 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Mountain Plover *Charadrius montanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3638	Breeds Apr 15 to Aug 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Virginia's Warbler *Vermivora virginiae* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9441	Breeds May 1 to Jul 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week

months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

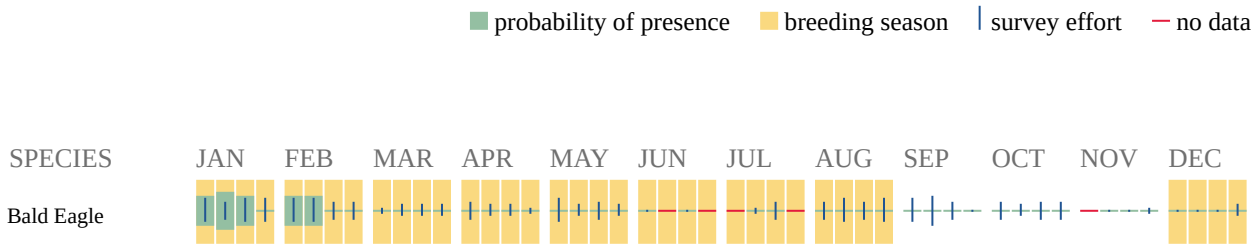
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding

in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities,

should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER POND

- Palustrine

RIVERINE

- Riverine

IPaC User Contact Information

Agency: County of Navajo
Name: Allen Graber
Address: 1645 S. Plaza Way
City: Flagstaff
State: AZ
Zip: 86001
Email agraber@swca.com
Phone: 9286075161

APPENDIX B

Arizona Environmental Online Review Tool Reports for the Project

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:
West Camp Wind Farm

User Project Number:
64382

Project Description:
proposed wind farm south of Joseph City

Project Type:
Energy Storage/Production/Transfer, Energy Production (generation), wind power facility (new)

Contact Person:
Allen Graber

Organization:
SWCA

On Behalf Of:
PRIVATE

Project ID:
HGIS-16450

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.

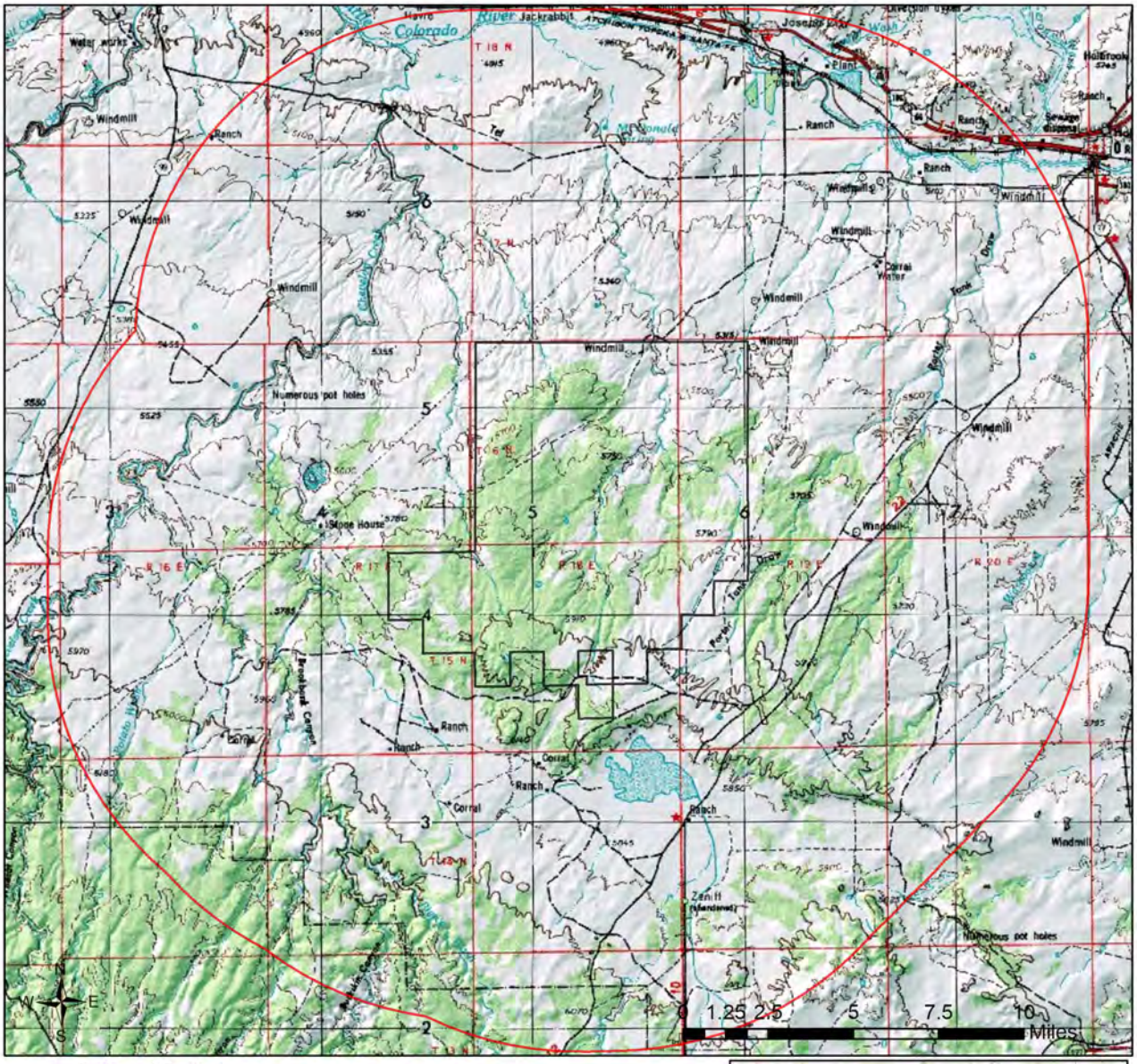
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

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

West Camp Wind Farm

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 52,529.37

Lat/Long (DD): 34.7482 / -110.4246

County(s): Navajo

AGFD Region(s): Pinetop

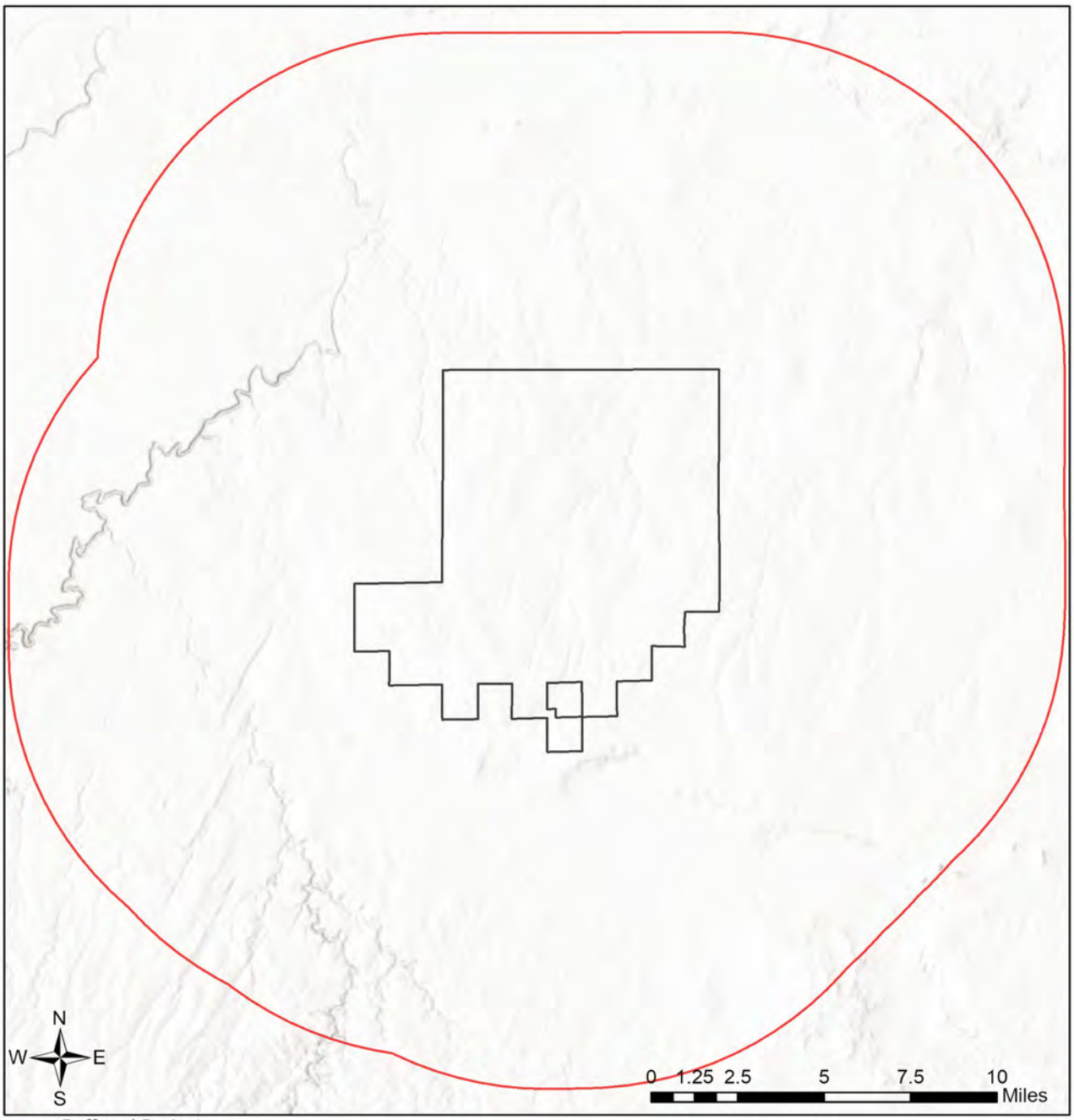
Township/Range(s): T15N, R17E; T15N, R18E; T15N, R19E +

USGS Quad(s): CHIMNEY CANYON; DRY LAKE NE +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

West Camp Wind Farm

Web Map As Submitted By User



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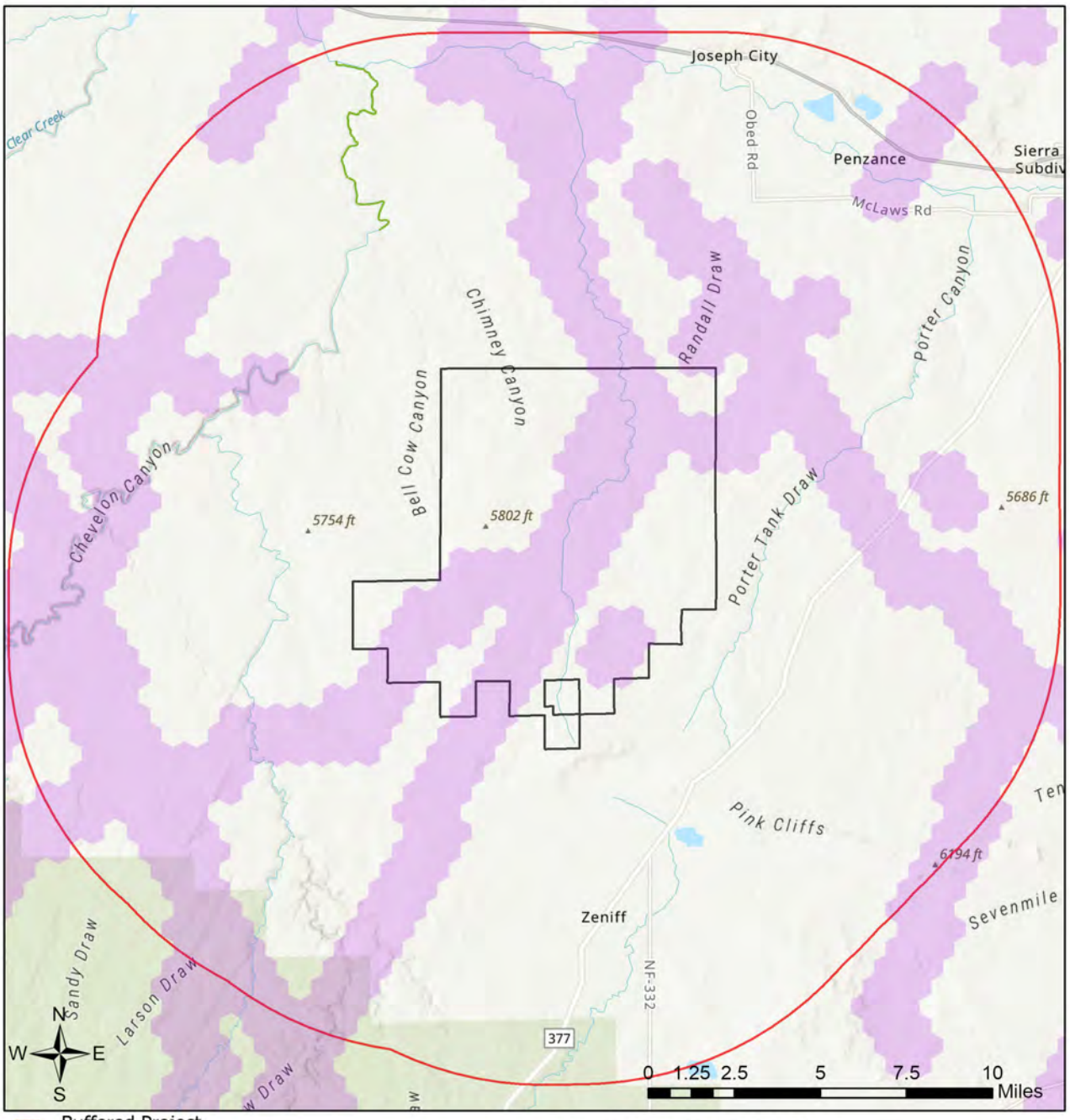
West Camp Wind Farm

Important Areas



- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 52,529.37

Lat/Long (DD): 34.7482 / -110.4246

County(s): Navajo

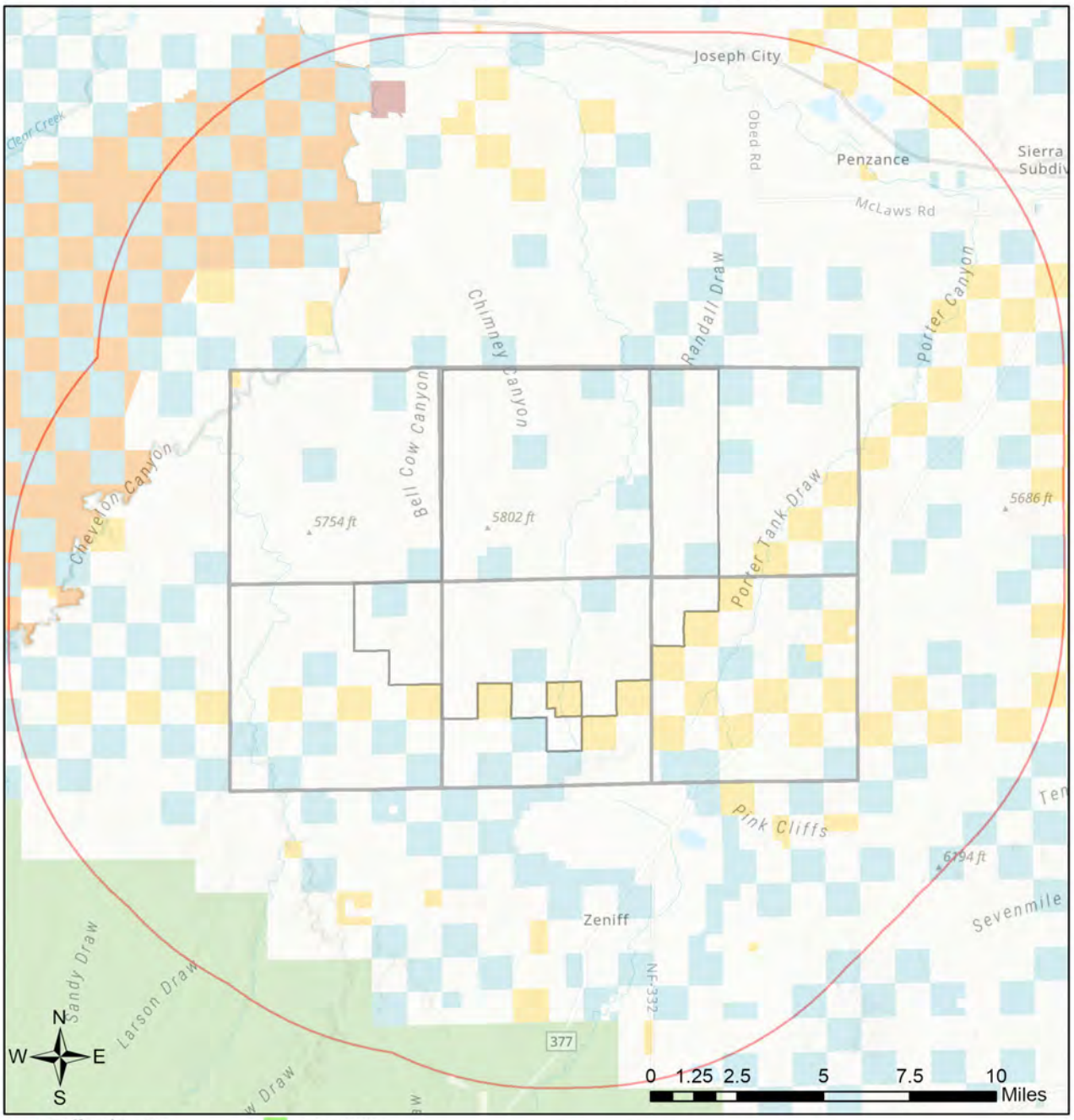
AGFD Region(s): Pinetop

Township/Range(s): T15N, R17E; T15N, R18E; T15N, R19E +

USGS Quad(s): CHIMNEY CANYON; DRY LAKE NE +

West Camp Wind Farm

Township/Ranges and Land Ownership



- Buffered Project Boundary
- Project Boundary
- 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
- Township/Ranges

Project Size (acres): 52,529.37

Lat/Long (DD): 34.7482 / -110.4246

County(s): Navajo

AGFD Region(s): Pinetop

Township/Range(s): T15N, R17E; T15N, R18E; T15N, R19E +

USGS Quad(s): CHIMNEY CANYON; DRY LAKE NE +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 10 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Anodonta californiensis	California Floater	SC	S			1A
Aquila chrysaetos	Golden Eagle	BGA		S		1B
Bat Colony						
Buteo regalis	Ferruginous Hawk	SC		S		1B
Catostomus sp. 3	Little Colorado Sucker	CCA	S	S		1A
Errazurizia rotundata	Roundleaf Errazurizia			S	SR	
Gila robusta	Roundtail Chub	SC	S	S		1A
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC, BGA	S	S		1A
Lepidomeda vittata	Little Colorado Spinedace	LT				1A
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Nyctinomops macrotis	Big Free-tailed Bat	SC				
Pediocactus peeblesianus ssp. peeblesianus	Peebles Navajo Cactus	LE			HS	
Perognathus flavus goodpasteri	Springerville Pocket Mouse	SC	S			1B
Sclerocactus papyracanthus	Grama-grass Cactus	SC			SR	
Sclerocactus whipplei	Whipple's Fishhook Cactus				SR	
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B

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

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Important Connectivity Zone	Wildlife Connectivity					
N/A	Apache/Navajo Counties Wildlife Movement Area - Diffuse					

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

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Anaxyrus microscaphus	Arizona Toad	SC		S		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
Callipepla squamata	Scaled Quail					1C

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Castor canadensis	American Beaver					1B
Chordeiles minor	Common Nighthawk					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Cynomys gunnisoni	Gunnison's Prairie Dog	SC		S		1B
Empidonax traillii extimus	Southwestern Willow Flycatcher	LE				1A
Empidonax wrightii	Gray Flycatcher					1C
Euderma maculatum	Spotted Bat	SC	S	S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Gymnorhinus cyanocephalus	Pinyon Jay			S		1B
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A
Lasiurus blossevillii	Western Red Bat		S			1B
Lithobates pipiens	Northern Leopard Frog		S	S		1A
Melospiza lincolnii	Lincoln's Sparrow					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
Neotoma stephensi	Stephen's Woodrat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Panthera onca	Jaguar	LE				1A
Perognathus flavus goodpasteri	Springerville Pocket Mouse	SC	S			1B
Rallus limicola	Virginia Rail					1C
Setophaga petechia	Yellow Warbler					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Strix occidentalis lucida	Mexican Spotted Owl	LT				1A
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Troglodytes pacificus	Pacific Wren					1B
Vireo vicinior	Gray Vireo		S			1C
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Antilocapra americana americana	America Pronghorn					1B
Cervus elaphus	Elk					
Odocoileus hemionus	Mule Deer					

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida macroura	Mourning Dove					

Project Type: Energy Storage/Production/Transfer, Energy Production (generation), wind power facility (new)

Project Type Recommendations:
Fence recommendations will be dependant upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located on Wildlife Friendly Guidelines page, which is part of the WIldlife Planning button at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

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 the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at https://www.invasivespeciesinfo.gov/unitedstates/az.shtml and the Arizona Native Plant Society https://aznps.com/invas for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at https://imap.natureserve.org/imap/services/page/map.html.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select “See What’s Here” for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

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).

The effects of wind development projects on wildlife, in particular birds and bats, are well documented. The Department recommends conducting raptor nest, general avian, and threatened and endangered species surveys during the appropriate breeding/migration seasons within 10 miles of the project site to determine the location of active nests, migratory pathways, and associated species potentially disturbed by project activities. Effects that should be minimized or mitigated may include direct habitat loss from the wind plant footprint, including turbine base, access road, and substation construction; indirect habitat loss from increased human presence and/or turbine operation noise; habitat alteration, such as soil erosion and construction of migration-hindering obstacles; mortality by powerline electrocution; and mortality by collision with structures, turbine blades or guy wires. The Department has developed guidelines for wind energy development which can be found on the Wildlife Friendly Guideline on our Wildlife Planning page at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/. We also recommend referring to the USFWS Land-based Wind Energy Guidelines, http://www.fws.gov/windenergy/. We encourage the project proponent to coordinate directly with the Project Evaluation Program to identify and develop mitigation measures for these projects.

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (https://www.fws.gov/office/arizona-ecological-services).

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 native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:
Arizona Department of Agriculture
1688 W Adams St.
Phoenix, AZ 85007
Phone: 602.542.4373
https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf starts on page 44

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.

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 https://www.fws.gov/office/arizona-ecological-services 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

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.

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:
West Camp Wind Gen-Tie

User Project Number:
64382

Project Description:
Proposed gen-tie

Project Type:
Energy Storage/Production/Transfer, Energy Transfer, Power line/electric line (new)

Contact Person:
Allen Graber

Organization:
SWCA

On Behalf Of:
CONSULTING

Project ID:
HGIS-16601

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.

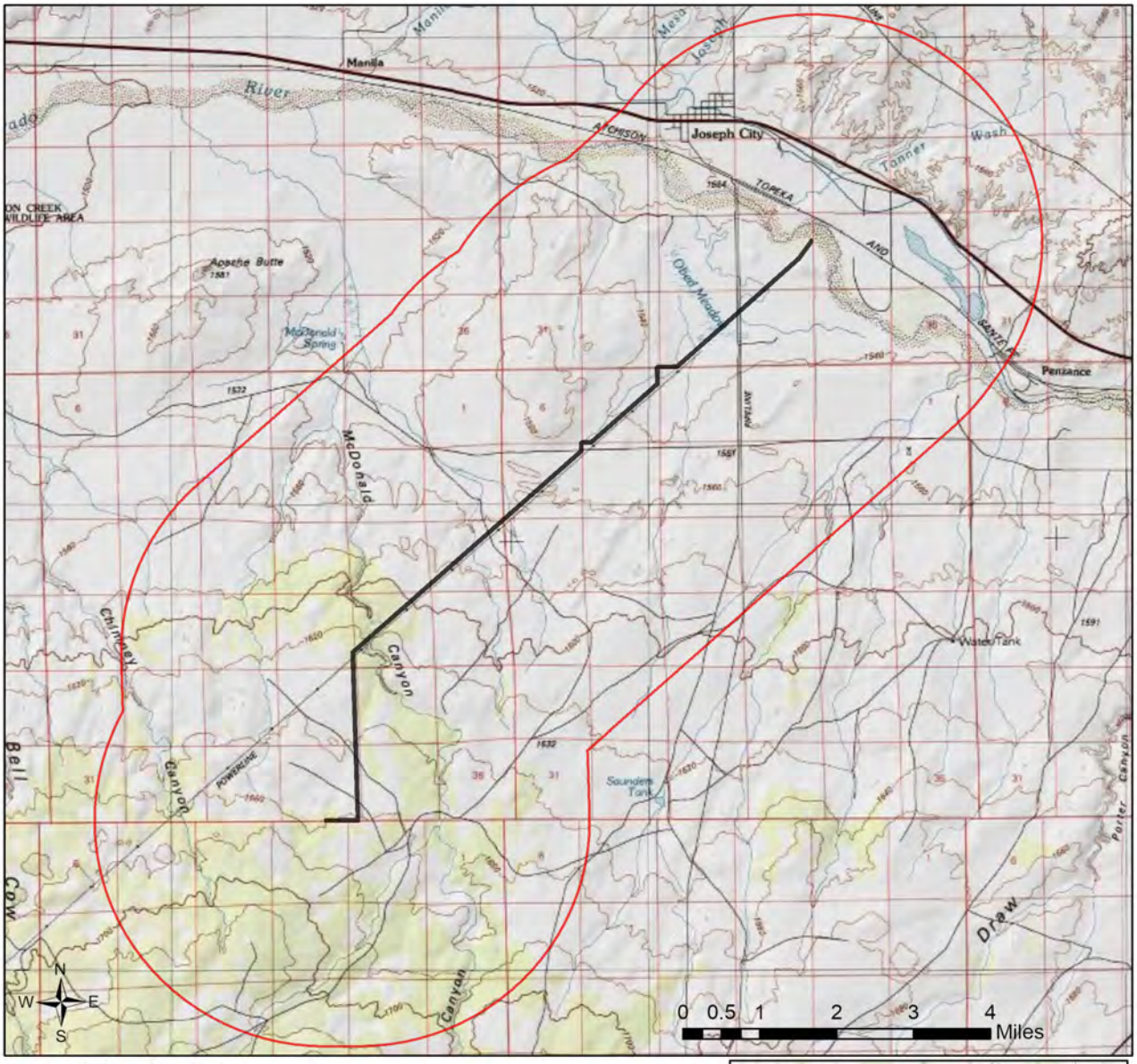
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

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

West Camp Wind Gen-Tie

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 199.51

Lat/Long (DD): 34.8902 / -110.3622

County(s): Navajo

AGFD Region(s): Pinetop

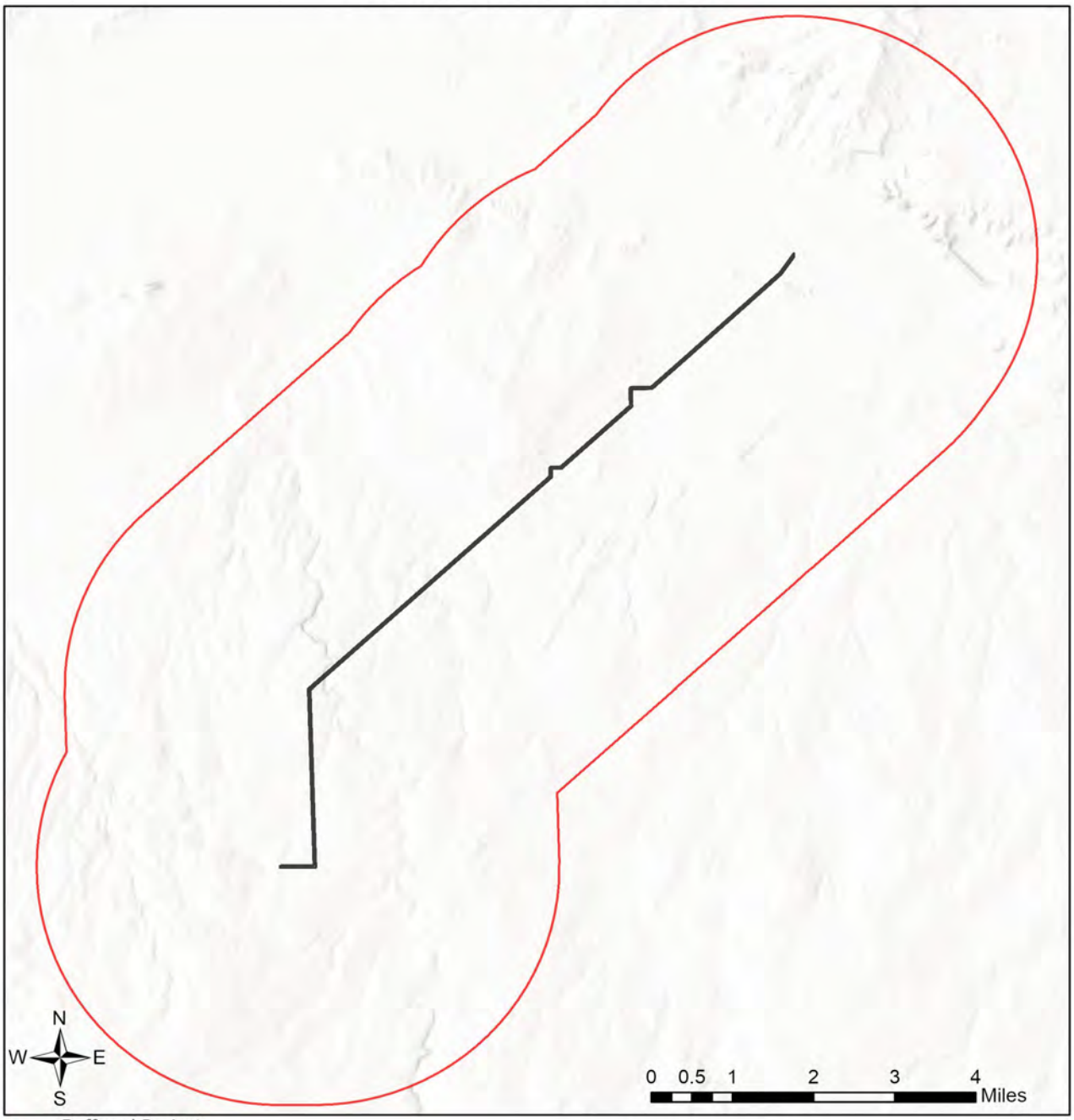
Township/Range(s): T16N, R18E; T17N, R18E; T17N, R19E +

USGS Quad(s): APACHE BUTTE; CHIMNEY CANYON +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

West Camp Wind Gen-Tie

Web Map As Submitted By User



Buffered Project Boundary

Project Boundary

Project Size (acres): 199.51

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County(s): Navajo

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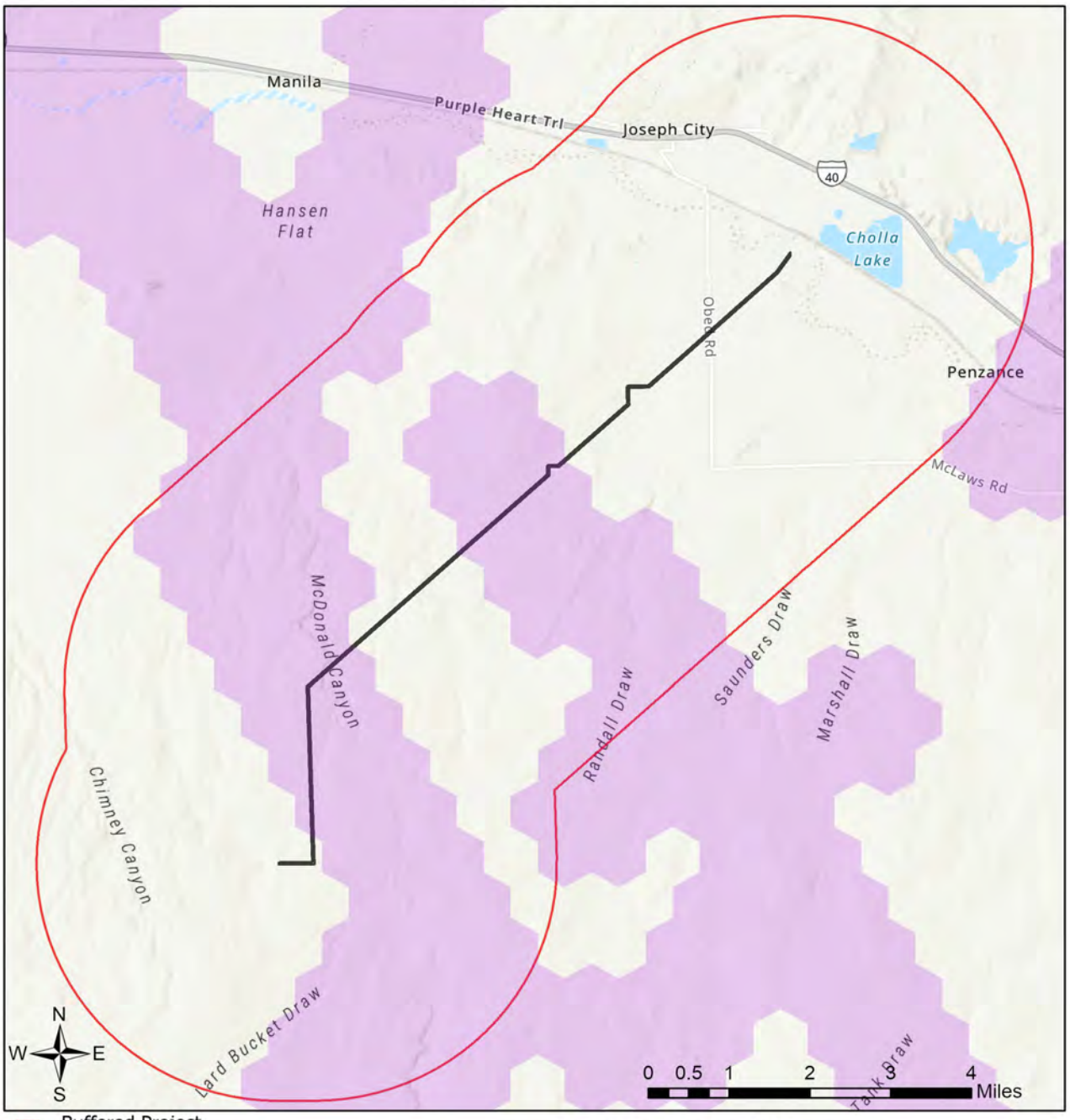
West Camp Wind Gen-Tie

Important Areas



- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 199.51

Lat/Long (DD): 34.8902 / -110.3622

County(s): Navajo

AGFD Region(s): Pinetop

Township/Range(s): T16N, R18E; T17N, R18E; T17N, R19E +

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Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Buteo regalis	Ferruginous Hawk	SC		S		1B
Errazurizia rotundata	Roundleaf Errazurizia			S	SR	
Pediocactus peeblesianus ssp. peeblesianus	Peebles Navajo Cactus	LE			HS	
Sclerocactus whipplei	Whipple's Fishhook Cactus				SR	

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

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Important Connectivity Zone	Wildlife Connectivity					
Little Colorado River	Apache/Navajo Counties Wildlife Movement Area - Riparian/Wash					
N/A	Apache/Navajo Counties Wildlife Movement Area - Diffuse					

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

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Anaxyrus microscaphus	Arizona Toad	SC		S		1B
Anodonta californiensis	California Floater	SC	S			1A
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
Callipepla squamata	Scaled Quail					1C
Castor canadensis	American Beaver					1B
Chordeiles minor	Common Nighthawk					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Cynomys gunnisoni	Gunnison's Prairie Dog	SC		S		1B
Empidonax wrightii	Gray Flycatcher					1C
Euderma maculatum	Spotted Bat	SC	S	S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Gymnorhinus cyanocephalus	Pinyon Jay			S		1B
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
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Lithobates pipiens	Northern Leopard Frog		S	S		1A
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Mustela nigripes	Black-footed Ferret	LE,XN				1A
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Neotoma stephensi	Stephen's Woodrat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Perognathus flavus goodpasteri	Springerville Pocket Mouse	SC	S			1B
Rallus limicola	Virginia Rail					1C
Setophaga petechia	Yellow Warbler					1B
Spizella breweri	Brewer's Sparrow					1C
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Troglodytes pacificus	Pacific Wren					1B
Vireo vicinior	Gray Vireo		S			1C
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

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

Project Type: Energy Storage/Production/Transfer, Energy Transfer, Power line/electric line (new)

Project Type Recommendations:
Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at https://www.invasivespeciesinfo.gov/unitedstates/az.shtml and the Arizona Native Plant Society https://aznps.com/invas for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at https://imap.natureserve.org/imap/services/page/map.html.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select “See What’s Here” for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

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 (https://www.fws.gov/office/arizona-ecological-services).

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.

Project Location and/or Species Recommendations:
HDMS records indicate that one or more native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:
Arizona Department of Agriculture
1688 W Adams St.
Phoenix, AZ 85007
Phone: 602.542.4373
https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf starts on page 44

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

Photographs

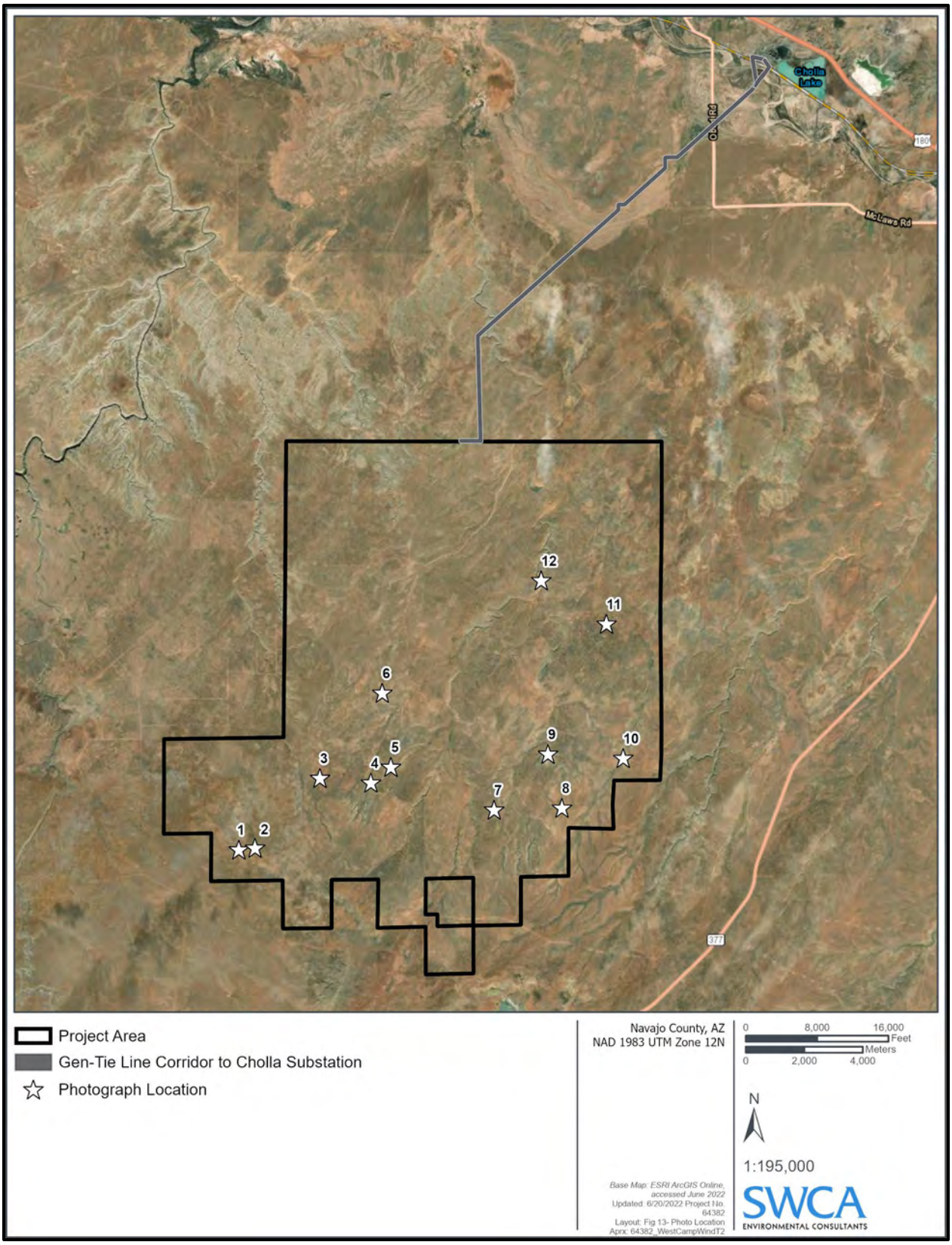

Figure C-1. Key to Appendix C site photographs (below).

Photograph C-1. Sinkhole; southwest corner of the project area (see Point 1, Figure C-1), facing east, January 27, 2022.

Photograph C-2. Semi-desert grassland habitat; view from the southwest corner of the project area (see Point 2, Figure C-1), facing east, January 27, 2022.

Photograph C-3. View from the southwest portion of the project area (see Point 3, Figure C-1), facing east, illustrating juniper eradication efforts, January 27, 2022.

Photograph C-4. Lower Bigler Tank; southwest portion of the project area (see Point 4, Figure C-1), facing east, January 27, 2022.

Photograph C-5. Transition to denser pinyon-juniper from juniper savanna; view from the central portion of the project area (see Point 5, Figure C-1), facing west, January 27, 2022.

Photograph C-6. Pinyon-juniper savanna; view from west-central portion of the project area (see Point 6, Figure C-1), facing south, August 28, 2021.

Photograph C-7. Juniper savanna habitat; view from the south-central portion of the project area (see Point 7, Figure C-1), facing north, January 27, 2022.

Photograph C-8. Semi-desert grassland/shrub-steppe habitat; view from the southeast portion of the project area (see Point 8, Figure C-1), facing north, August 28, 2021.

Photograph C-9. Cement Tank (check dam) containing emergent vegetation; view from the southeast portion of the project area (see Point 9, Figure C-1), facing northwest, January 27, 2022.

Photograph C-10. White Tank; view from southeast portion of the project area (see Point 10, Figure C-1), facing west, August 28, 2021.

Photograph C-11. Pinyon-juniper habitat, illustrating sandy substrate; view from the eastern portion of the project area (see Point 11, Figure C-1), facing west, January 27, 2022.

Photograph C-12. Lost Tank Canyon; view from the northeast portion of the project area (see Point 12, Figure C-1), facing north, March 10, 2021.

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EXHIBIT B – ATTACHMENT B-3

Preconstruction Wildlife Survey Plan for the West Camp Wind Farm, Navajo County, Arizona

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Preconstruction Wildlife Survey Plan for the West Camp Wind Farm, Navajo County, Arizona

APRIL 2022

PREPARED FOR

AES Clean Energy

PREPARED BY

SWCA Environmental Consultants

PRECONSTRUCTION WILDLIFE SURVEY PLAN FOR THE WEST CAMP WIND FARM, NAVAJO COUNTY, ARIZONA

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SWCA Project No. 64382

April 2022

EXECUTIVE SUMMARY

AES Clean Energy (AES) is proposing to develop the West Camp Wind Farm (project). The project would be located on private lands, and possibly on state lands, within a 53,000-acre project area approximately 10 miles southwest of Joseph City, Navajo County, Arizona. AES initiated preconstruction wildlife surveys following state and federal wind energy guidelines in May 2020. Those surveys were a continuation of surveys that had been completed by a different developer who had initiated their surveys in October 2019.

The purpose of this plan is to describe the previously completed and future proposed site-specific preconstruction wildlife survey methods and timelines, in preparation for agency coordination. This plan includes the following surveys:

- Avian use surveys
- Eagle and other raptor species nest surveys
- Bat acoustic surveys

This plan also includes a description of the incidental wildlife observations that have been and will continue to be recorded during the surveys.

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CONTENTS

Appendices

Figures

Tables

1 INTRODUCTION

AES Clean Energy (AES) is proposing to develop the West Camp Wind Farm (project). The project would be located on private lands, and possibly state lands, within a 53,000-acre project area approximately 10 miles southwest of Joseph City, Navajo County, Arizona (Figures 1 and 2). The point of interconnection (Cholla Substation) would be 2 miles southeast of Joseph City (10 miles northeast of the project area).

The project was considered by a different developer, who initiated monthly avian use surveys on-site from October 2019 through March 2020. AES then continued those surveys from May 2020 through September 2021. In 2021, AES also implemented one season (March through November) of bat acoustic surveys and raptor nest surveys (in February and March). All surveys were performed by SWCA Environmental Consultants (SWCA). The purpose of this plan is to describe the site-specific preconstruction wildlife survey methods of the previously conducted surveys and those planned in the future. This plan is being submitted prior to initial agency coordination, which is anticipated to take place in the second quarter of 2022. Project permitting—a Navajo County Special Use Permit and an Arizona Corporation Commission Certificate of Environmental Compatibility—will be pursued in the third and fourth quarters of 2022.

The surveys have been designed to meet state and federal wind energy guidelines.[1] Survey data will provide quantitative and qualitative assessments used to sufficiently evaluate wildlife risk, avoidance and minimization measures, and compensatory mitigation measures if adverse impacts cannot acceptably be avoided. The *Wildlife Site Characterization for the Proposed West Camp Wind Farm* report (SWCA 2022) will cover WEG Tiers 1 and 2 (Preliminary Site Evaluation and Site Characterization), ECPG Stage 1 (Site Assessment), and AGFD's *Guidelines for Reducing Impacts to Wildlife from Wind Energy Development in Arizona* Chapter 2 objectives (AGFD 2012).

This plan describes the following surveys:

- avian use surveys
- eagle and other raptor species nest surveys
- bat acoustic surveys

The plan also includes a description of the incidental wildlife observations that have and will continue to be recorded during all preconstruction wildlife surveys. The plan excludes native plant surveys, aquatic resources delineation, and Migratory Bird Treaty Act construction compliance surveys, specificity for which will be formulated later, informed by a future, more advanced project design (including whether any project infrastructure will be on state lands and construction timing once known).

[1] Pertinent wind energy guidelines specific to preconstruction field studies include the U.S. Fish and Wildlife Service's (USFWS's) Eagle Rule (USFWS 2016), *Land-Based Wind Energy Guidelines* (WEG) Tier 3 – Field Studies to Document Site Wildlife and Habitat and Predict Project Impacts (USFWS 2012), *Eagle Conservation Plan Guidance* (ECPG) Stage 2 – Site Specific Surveys and Assessment (USFWS 2013), and Arizona Game and Fish Department's (AGFD's) *Guidelines for Reducing Impacts to Wildlife from Wind Energy Development in Arizona* Chapter 3 (AGFD 2012).

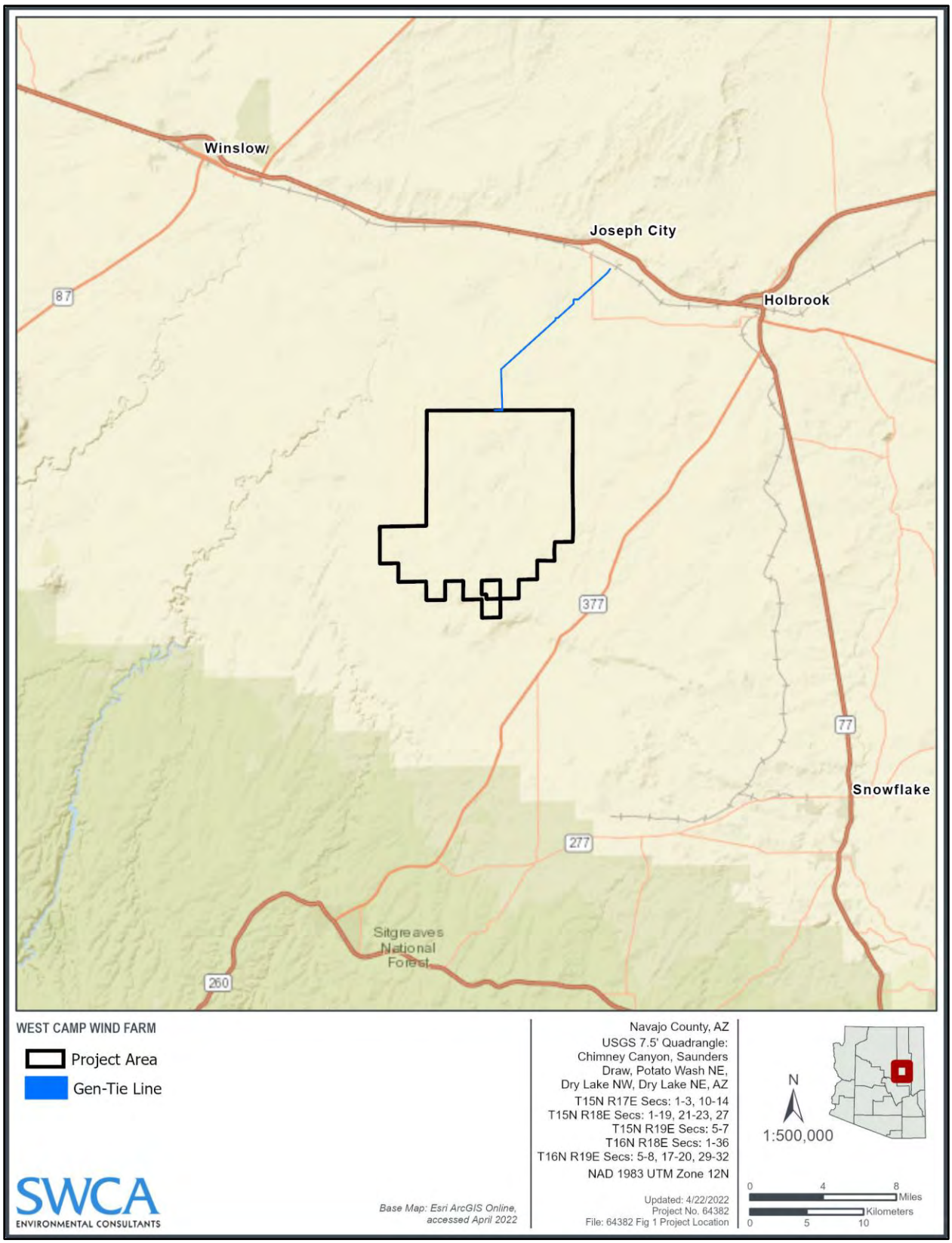

Figure 1. Project location.

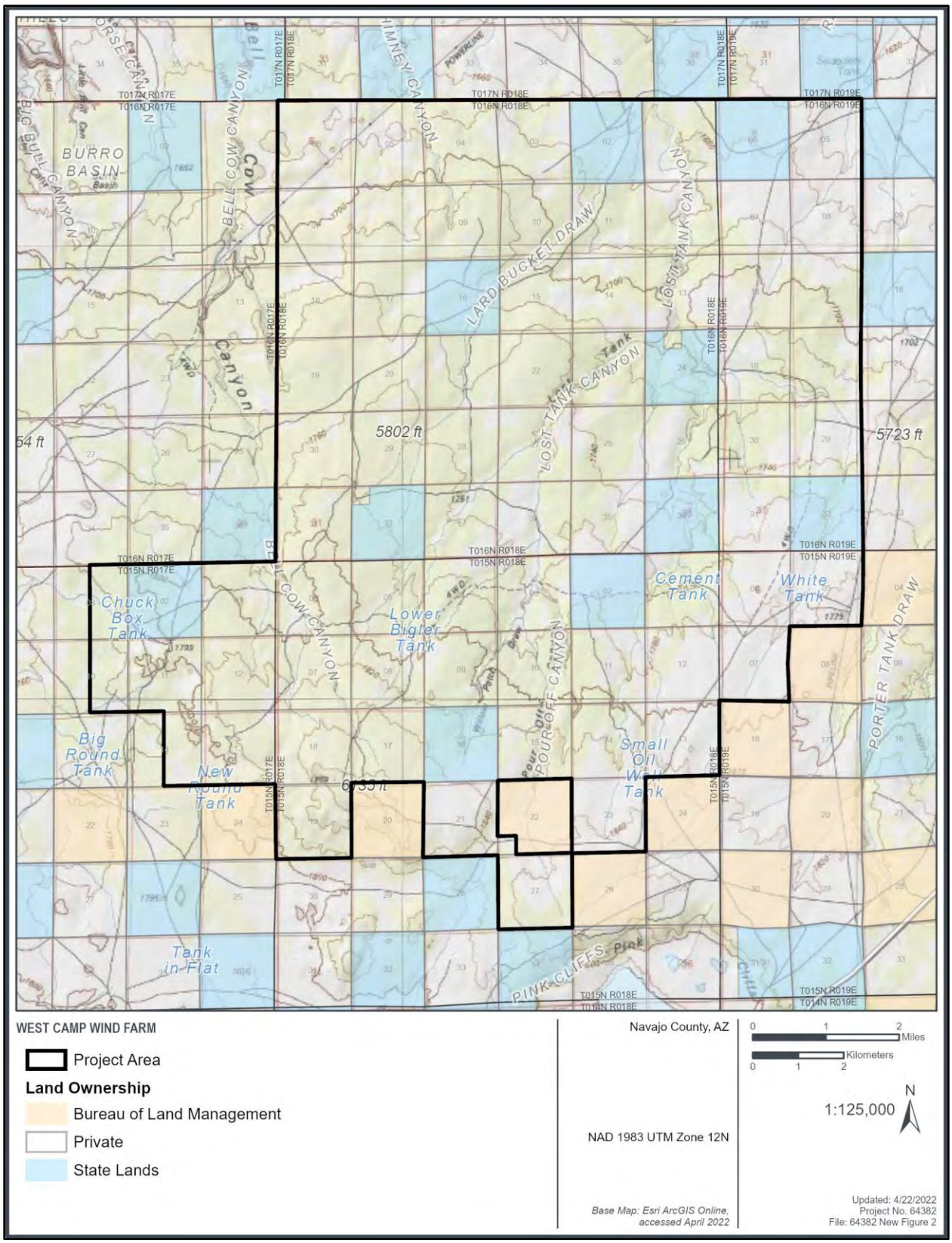

Figure 2. Project area detail.

2 PRECONSTRUCTION WILDLIFE SURVEY SCHEDULE

Table 1 presents the previously conducted wildlife survey effort and the proposed schedule for future surveys.

Table 1. Preconstruction Wildlife Survey Schedule for the Project

Survey Type	Time Frame
Avian (small bird and large bird, including eagle) use surveys	October 2019–March 2020, May 2020–September 2021; surveys conducted monthly
Raptor nest surveys	February and March 2021 and 2023; two surveys during each of the 2021 and 2023 breeding seasons
Bat acoustic surveys	March–November 2021 (i.e., spring through fall seasons) and March–November 2023; units record data daily
Incidental wildlife observations	Conducted during all wildlife-related fieldwork

3 AVIAN USE SURVEYS

3.1 Eagle and Other Large Bird Use Surveys

The avian use surveys took place for 2 years, monthly, from October 2019 through March 2020 and May 2020 through September 2020 (Year 1, 11 survey periods) and from October 2020 through September 2021 (Year 2, 12 survey periods). The surveys were designed in accordance with the Eagle Rule (USFWS 2016), which codified specific minimum survey standards, WEG (USFWS 2012), ECPG (USFWS 2013), and AGFD's guidelines (AGFD 2012).

Thirty-one 800-m-radius plots were initially established to cover at least 30% of the project's footprint[2] (i.e., turbine array design) alternatives. In December 2020, the survey effort was increased to 34 plots (by adding plots 32–34; Figures 3 and 4) when the project area boundary was expanded to the northeast. Then, in January 2021, the effort was reduced to 32 plots (by removing plots 13 and 14) based on a maximum turbine array design being considered at that time. That 32-plot effort continued through September 2021. Of these 32 plots, 29 are within or overlap with the project footprint (i.e., turbine array design) being considered at this early planning stage, covering 36% of that area (see Figures 3 and 4).

The survey plots were distributed to represent the site spatially and to represent the habitat conditions (i.e., plots represented grassland/shrub steppe and pinyon-juniper habitats, water, and topographic features). Within those parameters, the plots were micro-sited in the field to maximize views of the surrounding airspace.

[2] The Eagle Rule (USFWS 2016) defines the project's footprint as the minimum-convex polygon that encompasses the wind-project area inclusive of the hazardous area around all turbines and any associated utility infrastructure, roads, etc.

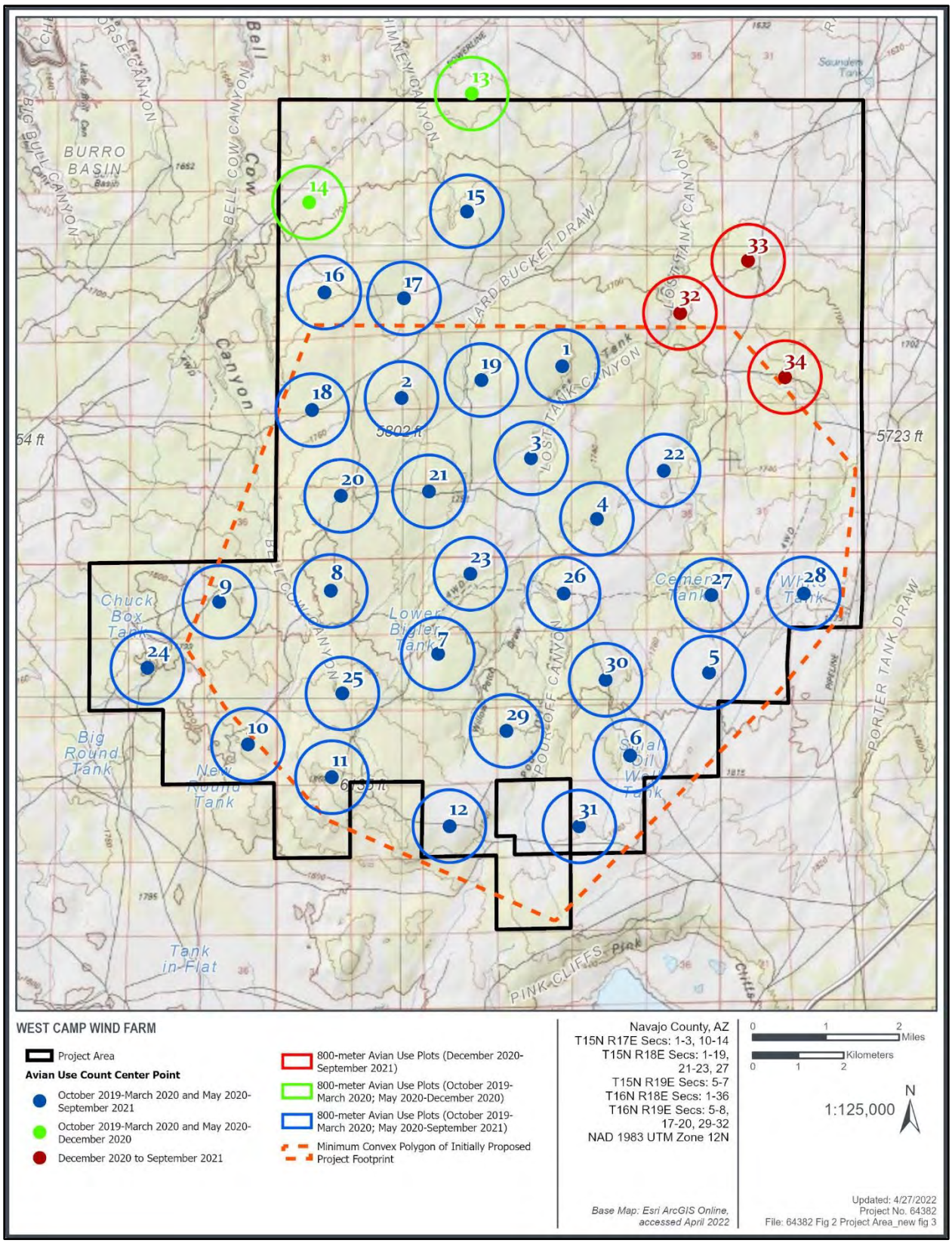

Figure 3. Avian use count locations, topographic background.

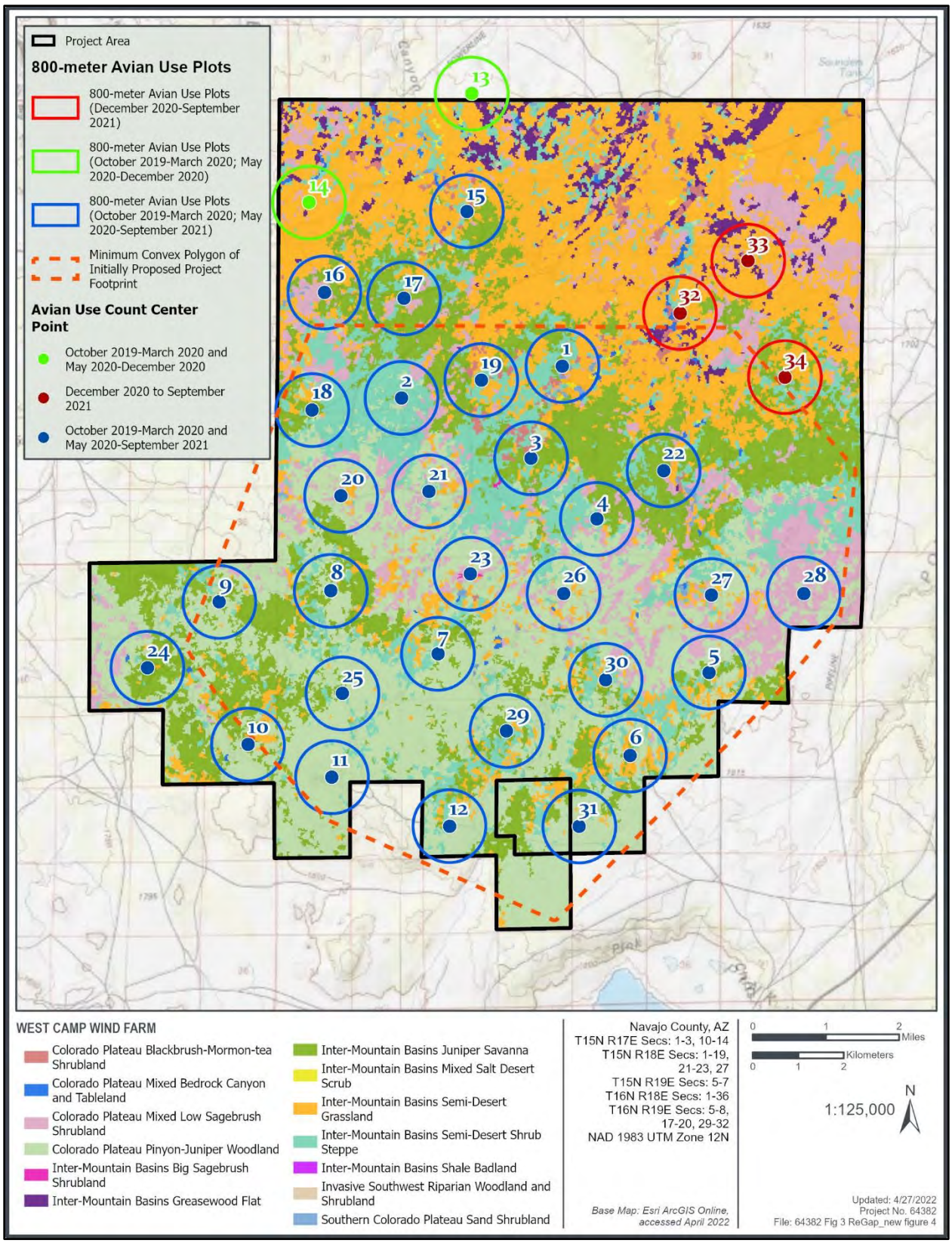

Figure 4. Avian use count locations in relation to U.S. Geological Survey–mapped landcover data (2016).

Each plot was surveyed for 1 hour once per month. Start times represented all daylight hours, and surveyors alternated between morning (i.e., before 10:00 a.m.) and late morning/afternoon time slots, per plot, in consecutive survey periods. Surveyors adhered to the schedule as logistics, weather, and safety issues (e.g., lightning, visibility)[3] allowed. From the center point of each plot, surveyors scanned for eagles and other large birds—at any height within the 800-m-radius plot—by alternating use of binoculars and unaided eye. Large birds were roughly defined as those of more than 12.5 inches [31.8 cm] in length and of more than 14 ounces,[4] including the following:

- birds of prey and vultures (Accipitriformes, Falconiformes, Strigiformes)
- large corvids (e.g., ravens; Passeriformes > Corvidae > *Corvus*)
- waterfowl (ducks, geese, and swans; Anseriformes)
- other large waterbirds (e.g., bitterns, coots, cranes, egrets, grebes, herons; Gruiformes, Podicipediformes, Pelecaniformes)
- large upland gamebirds (e.g., grouse, turkey; Galliformes)

For each large bird/bird group seen or heard (within the 800-m-radius plot), surveyors recorded start and end times (to the nearest second), species, number of birds per observation, distance from the observer (estimated to the nearest meter), flight height (estimated to the nearest meter), and behavior. Distance and height measurements were recorded when a bird/bird group was first observed (Reynolds et al. 1980, as cited in USFWS 2012). If a given bird/bird group was initially detected above 200 m, surveyors also recorded whether the bird/bird group flew below 200 m (i.e., risk zone). Observations of perched birds were distinguished from observations of those in flight. To limit double-counting of individuals, individuals were tracked (to the extent practicable), as, for example, they left the plot and then re-entered.

To estimate horizontal and vertical distances, surveyors used a rangefinder, accurate to a maximum distance of 914 m; digital topographic maps depicting 100-, 200-, 400-, 600-, and 800-m concentric circles; a digital (tablet) measuring tool; and vertical landmarks (e.g., meteorological towers and trees of known height). Specific behavioral activities included soaring flight, unidirectional flapping-gliding, kiting-hovering, stooping/diving at prey, undulating/territorial flight, and perching (USFWS 2013).

For any eagles observed within the 800-m-radius × 200-m-high cylinder[5], surveyors recorded data attributes by eagle-minute (i.e., eagles in flight are partitioned into 1-minute intervals). Data attributes included distance, height, behavior, the bearing to the bird, flight direction, and sex and age class (if known) (USFWS 2013). Perched eagles and those observed outside of the cylinder were also recorded but were distinguished from eagles flying within the cylinder (USFWS 2013). All eagle flight paths and perch locations, in and outside of the cylinder, were mapped on the digital topographic maps.

During each count, surveyors recorded wind direction and speed, cloud cover, precipitation, and temperature (USFWS 2013).

[3] Per the ECPG, surveys were not conducted when visibility is less than 800 m horizontally and less than 200 m vertically.

[4] Exceptions to this rough length and weight definition include small birds of prey (e.g., American kestrel [*Falco sparverius*], merlin [*Falco columbarius*]), nightjars (e.g., common nighthawk [*Chordeiles minor*]), and large shorebirds (e.g., American avocet [*Recurvirostra americana*]), because those species are easier to detect using the large bird versus small bird survey technique (see Section 3.2) and/or match the large bird surrogate definition used for postconstruction fatality surveys.

[5] Eagle minutes were recorded using a traditional 200-m height cutoff. Because the Eagle Rule (USFWS 2016) specifies that the cylinder's height will either be 200 m or 25 m above the maximum blade reach, whichever is greater, final turbine specifications will be reviewed and an appropriate post-hoc analysis solution will be implemented if warranted.

3.2 Small Bird Use Surveys

The small bird surveys were conducted for 10 minutes within a 100-m survey radius (Matsuoka et al. 2014; Ralph et al. 1993; Ralph et al. 1995; Reynolds et al. 1980) immediately prior to the large bird/eagle use counts at the same points (see Section 3.1 and Figures 3 and 4).[6] Small birds were roughly defined as those of less than 12.5 inches in length and of less than 14 ounces, including the following:

- passerines (Passeriformes)
- doves (Columbiformes)
- hummingbirds (Apodiformes)
- small corvids (e.g., jays; Passeriformes > Corvidae > *Aphelocoma, Cyanocitta, Gymnorhinus*)
- small shorebirds (Charadriiformes)
- woodpeckers (Piciformes)

For each small bird/bird group seen or heard (within the 100-m-radius plot), surveyors recorded species, number of birds per observation, distance from the observer (estimated to the nearest meter), and flight height (estimated to the nearest meter). Distance and height measurements were estimated using a rangefinder and vertical landmarks.

3.3 Data Interpretation/Analyses

Avian use count data are used to estimate the annual number of eagle collision fatalities, to identify important eagle (and other avian species of concern) use or migration concentration areas, and to estimate relative abundance of diurnal birds using the project area over space and time (USFWS 2012, 2013).

Each eagle observed flying within the sampling area will be summarized in number of minutes, rounded to the next highest integer (e.g., an eagle observed flying within the cylinder for a given minute equals 1 exposure minute; two eagles in flight in the cylinder in a given minute [or the same eagle in flight continuing into a second 1-minute interval] equals 2 exposure minutes). The spatial and temporal distribution of eagle minutes will be summarized. Eagle minutes and total survey minutes recorded among relevant avian use counts will be used to inform a posterior probability distribution of eagle exposure to develop model-based predictions of annual eagle fatalities (Bayesian method) (USFWS 2013, 2016). All eagle flight paths will be presented on a final map, with those recorded during use surveys distinguished from those recorded incidentally (see Section 6) to account for spatial bias (USFWS 2013).

Other compilations of the data will include species/species group composition, total detections, relative abundance, frequency of occurrence, and mean use. These terms are defined as follows:

- Species/species group composition: a list of species or species groups. Results will distinguish those species detected incidentally on-site from those detected during the formal counts. Species groups will include, for example, diurnal birds of prey, doves, hummingbirds, nightjars, owls, passerines, shorebirds, vultures, waterfowl/waterbirds, and woodpeckers.
- Detections (also often referred to as “abundance”): the number of unique observations of individual birds by species or species group; during a given count, surveyors took care to avoid double-counting individuals to the extent possible (see Section 3.1).

[6] The ECPG (USFWS 2013) and AGFD (2012) recommend that the small bird counts be conducted exclusive of those for eagles and other large birds.

- Relative abundance: number of observed detections of a species or species group / number of total detections of all species or species groups combined × 100 (expressed as a percentage)
- Frequency of occurrence: number of surveys during which a species or species group was recorded / number of total surveys × 100 (expressed as a percentage)
- Mean use: number of detections of a species or species group / the number of total surveys (i.e., detections per unit time [1-hour period for large birds, 10-minute period for small birds]).

Use data will be grouped by season, plot, habitat type, and flight height categories to characterize baseline bird activity patterns of the project area. Seasons will be defined as spring (March through May), summer (June through August), fall (September through November), and winter (December through February).

4 RAPTOR NEST SURVEYS

In accordance with USFWS's (2020) *Technical Update to Eagle Nest Survey Protocols*, WEG (USFWS 2012), ECPG (USFWS 2013), and AGFD's (2012) guidelines, raptor nest surveys were conducted during the 2021 nesting season. These surveys included 1) two habitat-focused bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) nest inventory and nest occupancy[7] surveys in and within a 2-mile buffer of the project area (2-mile survey area), and 2) one transect-based survey for non-eagle raptor and common raven (*Corvus corax*) nests within the project area. The latter was conducted in conjunction with the second eagle nest survey. The survey timing focused on golden eagle peak laying (Survey 1) and early hatching (Survey 2) dates, as reported by McCarty et al. (2021), to maximize detection of nest occupancy as follows:

- Survey 1 (inventory and early nest occupancy): late February, when most nesting eagles were expected to have initiated courtship and nest maintenance/ornamentation, and a subset of nesting eagles was expected to be engaged in incubation activities.
- Survey 2 (continued inventory and late nest occupancy): late March, when all nesting eagles were expected to have initiated nesting activities.

The timing prioritized eagle nest occupancy over that of most[8] other raptor species and common raven, which exhibit peak nest initiation in April, after Survey 2 was completed.

The surveys were conducted by helicopter (Bell 206L-series "Long Ranger"), which allowed for efficient coverage of vast, rugged landscapes and for a close (typically 40–100 m), above-nest approach to accurately determine nest contents.

Survey 1 involved a full inventory of potential golden eagle nesting habitats within the 2-mile survey area. In Survey 2, all nests categorized as golden eagle or possible golden eagle nest structures in Survey 1 were revisited to document nest contents. During this second survey, surveyors thoroughly investigated appropriate nesting substrates near the previously identified nests to document any newly built nests or nests that may have been missed during Survey 1. During both surveys, surveyors recorded any non-eagle raptor or common raven nests found within the surveyed eagle nesting habitats.

[7] The term *nest occupancy* is defined as a nest in which one or more of the following occur: 1) young are raised; 2) eggs are laid; 3) an adult is observed sitting, presumably in incubation or brooding posture, in the nest; 4) two adults are observed perched on or near the nest; 5) an adult and a bird in immature plumage are observed on or near the nest and mating behavior was observed (e.g., display flights, copulation); or 6) recent repairs (e.g., fresh greenery, sticks with fresh breaks), mute (i.e., whitewash), or feathers are visible at or near the nest (Driscoll 2010; Postupalsky 1974; Steenhof and Newton 2007).

[8] An exception is great horned owl (*Bubo virginianus*), which is an early (January–February) layer.

The project area–focused non-eagle raptor nest inventory and nest occupancy surveys involved transect and strategic searches as described below. During this survey, surveyors also revisited non-eagle raptor and common raven nest structures that were previously discovered in Survey 1 within the project area to document nest occupancy status.

4.1 Eagle Nest Surveys

Survey preparation involved 1) delineating possible golden eagle nesting habitats within the 2-mile survey area, and 2) acquiring AGFD's previously identified golden eagle breeding areas (4 × 4–mile areas) within 5 miles of the project area. Figure 5 and Appendix A (Figure A-1) illustrate golden eagle and potential golden eagle breeding areas provided by AGFD and potential golden eagle nesting habitats mapped by SWCA. An SWCA biologist qualified as an experienced helicopter eagle nest surveyor (Pagel et al. 2010)[9] delineated the possible golden eagle nesting habitats (i.e., rugged terrain, rock faces, large trees and snags, and transmission towers) and led the survey effort. The habitats were manually digitized using a combination of aerial imagery (National Agriculture Imagery Program) and U.S. Geological Survey topographic maps viewed at 1:12,000 and 1:24,000 scales in ArcGIS. Bald eagle nesting habitats (i.e., large trees, snags, and cliffs less than 2 km [1.2 miles] from fish-bearing waters) were not present; however, surveyors kept an eye out for bald eagle nests within the possible golden eagle nesting habitats during the surveys. The breeding area blocks and associated past occupancy/activity[10] data (Appendix A) provided useful focal areas to streamline survey efforts and to inform expectations (e.g., the data provided a general understanding of the number of nests and nest structure condition recorded during past surveys).

Survey methods generally followed those outlined by Pagel et al. (2010). The surveys were sensitive to local nesting chronologies and disturbance at nests and were conducted during weather conditions favorable for aerial surveys. To ensure full coverage of the 2-mile survey area during the golden eagle nest inventories, surveyors—guided by the desktop delineation layer—identified additional golden eagle nesting habitats while in the air and, conversely, limited surveys in areas that did not exhibit appropriate characteristics once observed. During refueling, the surveyors and pilot evaluated survey coverage and updated the plan for the remainder of the surveys to achieve full coverage of potential nesting habitats.

For each nest found, surveyors recorded the date and time of the observation, a nest identification number, nest substrate (i.e., cliff, tree, transmission tower), nest condition and contents, and species (if known). "Undetermined species" nests included any nests that were too deteriorated to be confidently identified to species or that exhibited qualities characteristic of several species. For these nests, surveyors recorded an informed opinion regarding which species or species group was most likely to use the nest based on nest structure and placement (e.g., "undetermined: resembles *Buteo* spp. or golden eagle," or "undetermined: resembles *Buteo* spp. or common raven"). Species determinations were also noted for nests being used by species that presumably did not construct them (i.e., several species are known to use heterospecific nest structures; some species, such as great horned owl [*Bubo virginianus*], do not construct their own nests). A species determination for a given nest could change after a subsequent visit if surveyors observed species activity or nest contents or observed the nest structure under different conditions (e.g., distance, lighting).

[9] Pagel et al. (2010) recommend that aerial golden eagle nest surveys be conducted by raptor specialists who have at least 3 field seasons' experience in helicopter-borne raptor surveys around cliff ecosystems.

[10] An *active* nest is one in which an egg or eggs are laid and/or young are raised (Driscoll 2010; Postupalsky 1974).

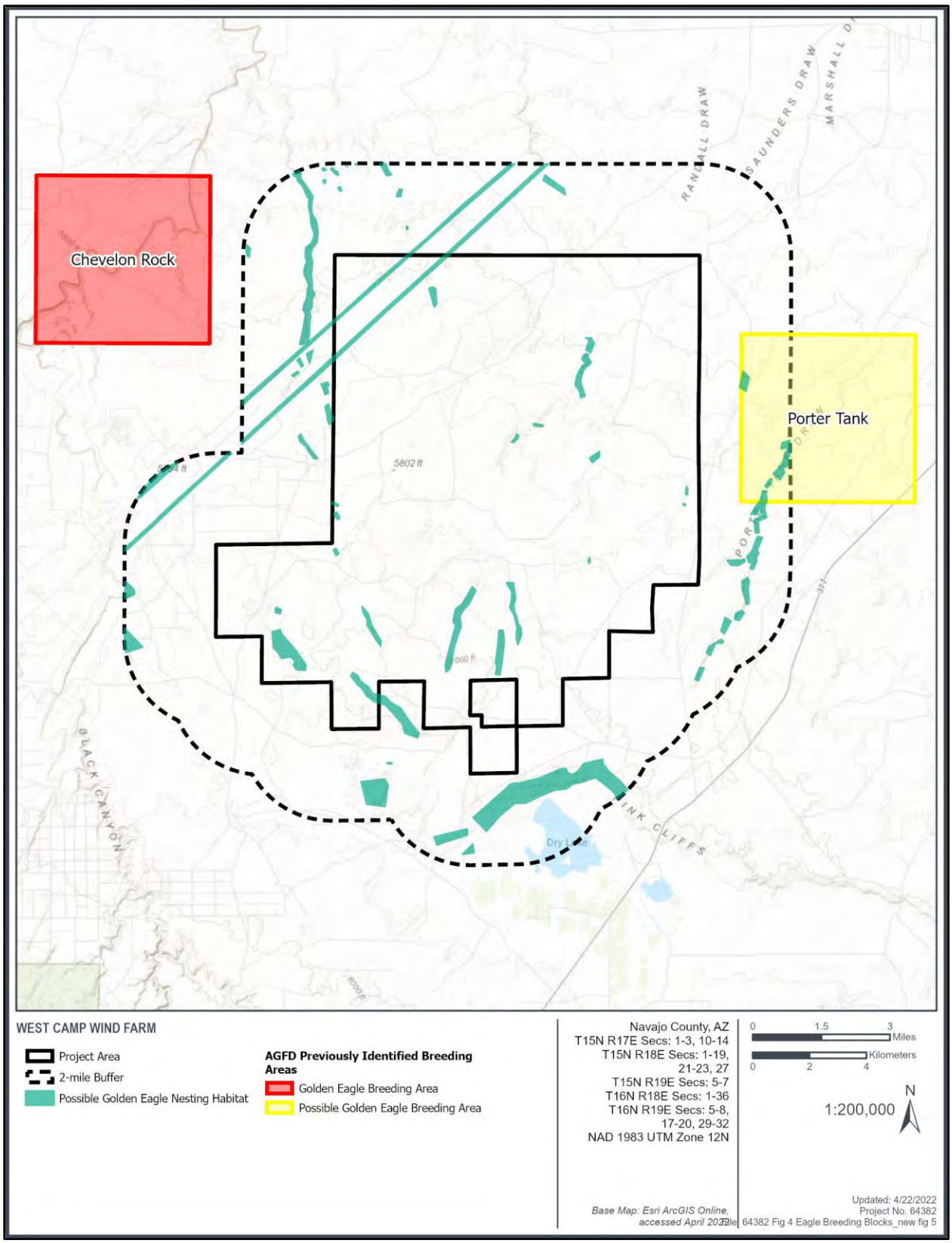

Figure 5. Eagle nest inventory and occupancy 2-mile survey area.

The following nest conditions/contents were recorded: 1) sticks – intact, 2) sticks – deteriorating, 3) greenery/ornamentation, 4) adult in incubation/brooding posture, or 5) number of egg(s)/nestling(s). Surveyors noted specific nest structure characteristics and diagramed specific nests within nest clusters to aid re-location of nests during subsequent visits. All nests were photographed using a full-frame digital single-lens reflex camera with a 200- to 500-mm lens. Following the surveys, photographs of each nest were thoroughly examined to accurately determine species and nest contents.

4.2 Non-eagle Species Nest Surveys

To inventory non-eagle raptor species and common raven nests within the project area, surveyors used a combination of transect (e.g., in densely treed habitats) and strategic (e.g., in lightly treed habitats) searches. North-south transects were spaced at 500-m intervals. In lightly treed habitats, and where certain habitats and features (e.g., treed drainages, cliff walls, transmission towers) required closer inspection, the surveyors directed the pilot to veer off transects.

Surveyors recorded the same data fields as those described in Section 4.1.

4.3 Year 2 Nest Surveys

Figure 6 presents the nest locations (n = 52) recorded in 2021, which included one possible golden eagle nest within the 2-mile survey area and five possible ferruginous hawk (*Buteo regalis*) nests (an AGFD species of greatest conservation concern) within the project area (SWCA 2021). Year 2 nest surveys will be conducted in 2023. These surveys will involve nest occupancy revisits of the possible golden eagle nest and a second inventory of all potential eagle nesting habitats within the 2-mile survey area. Surveyors will also revisit the five possible ferruginous hawk nests within the project area.

4.4 Data Interpretation/Analyses

Nest data will be used to estimate the number of nesting raptor pairs and their specific nest locations within the project area (AGFD 2012; USFWS 2012) and to identify nesting pairs of eagles that might be disturbed or subject to potential lethal take (USFWS 2013, 2020). The data may be used to identify avoidance or minimization options. Other compilations of the data will include nest occupancy/activity status (grouped by eagle territory) and the number of nests of each species grouped by focal area (i.e., within and outside of the project area).

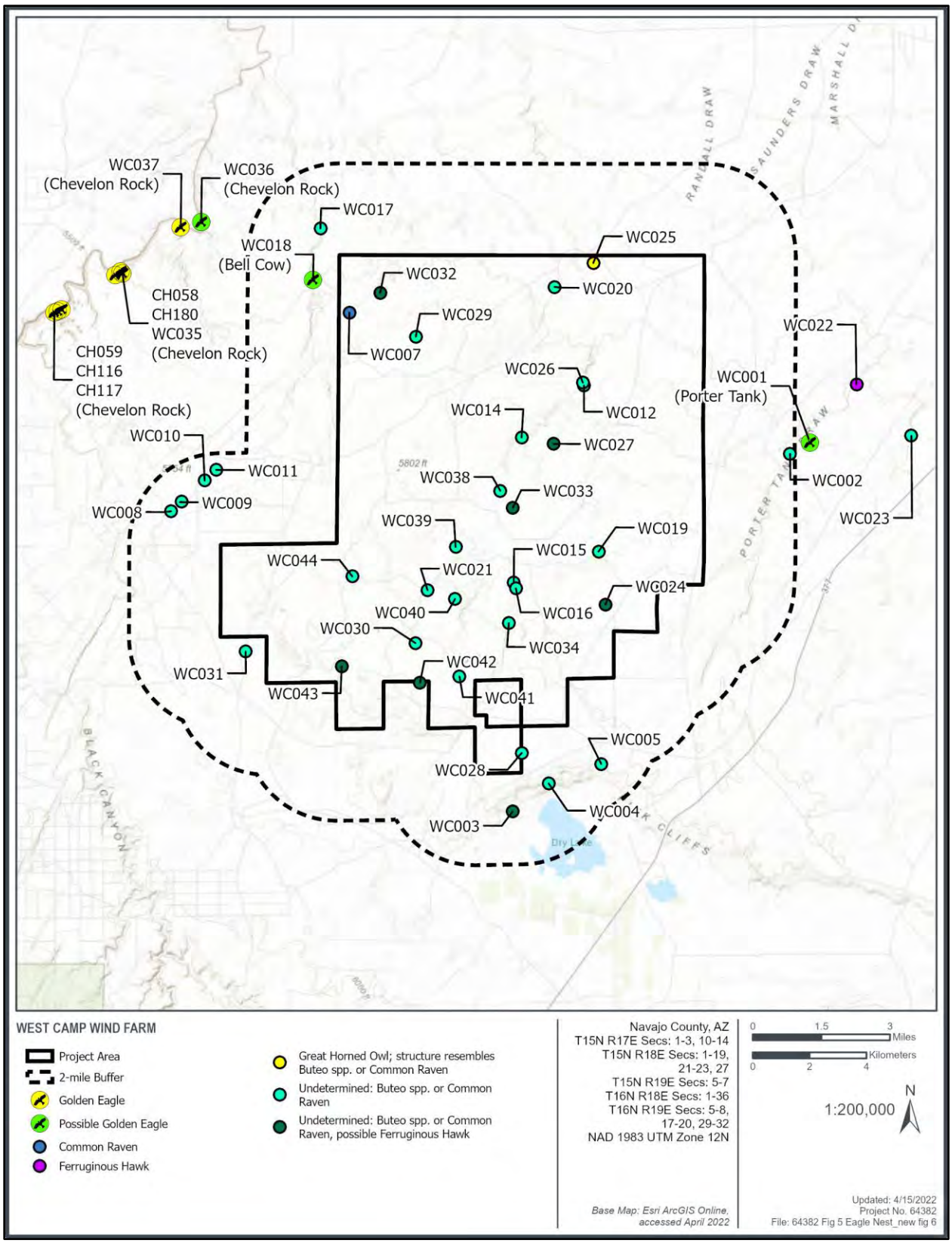

Figure 6. 2021 nest survey results.

5 BAT ACOUSTIC SURVEYS

5.1 Survey Plan

5.1.1 *Monitoring Stations*

To monitor bat activity, in March 2021 (the beginning of the spring season), four bat acoustic detectors were installed at three stations within the project area (Figure 7). Two of the stations were placed in areas that could attract certain commuting or foraging bats (Lower Bigler Tank [an ephemeral stock tank] and Lost Tank Canyon [a low-profile canyon/ephemeral drainage]). The third station was installed at a project meteorological (MET) tower. This MET tower station consisted of a high (45-m) and low (5-m) omnidirectional microphone each attached to a Song Meter SM4BAT FS (Wildlife Acoustics, Inc.) full- spectrum acoustic data collection device. The other two stations each consisted of a low (5-m) mount attached to the same detector type. Together, the stations represented the site's spatial (horizontal and vertical) and habitat conditions.

The units recorded bat activity daily, 30 minutes after sunset and 30 minutes before sunrise, through November 2021 (i.e., the end of the fall season). The units were set[11] to the following audio settings:

- Gain: 0 decibel
- 16k high filter: off
- Sample rate: 384 kilohertz (kHz)
- Minimum duration (noise scrubber): 2.0 milliseconds (ms)
- Maximum duration (noise scrubber): 500 ms
- Minimum trigger frequency: 8 kHz
- Trigger level: 24 decibels
- Trigger window: 2 seconds
- Maximum file length: 5 seconds

Surveyors collected data cards and replaced batteries at least once per month through November 2021.

5.2 Year 2 Bat Acoustic Surveys

Because the bat rigging supporting the high microphone at the MET tower failed in September 2021 (during the bat migration season), a second year of bat acoustic data will be collected in 2023. Figure 7 illustrates the proposed five unit, three station locations: a high- and low-microphone pairing at each of two newly installed MET towers, and the Lost Tank Canyon location.

[11] Specific settings were based on regional expert guidance (personal communication, Janet Tyburec, Bat Survey Solutions, LLC, April 2018).

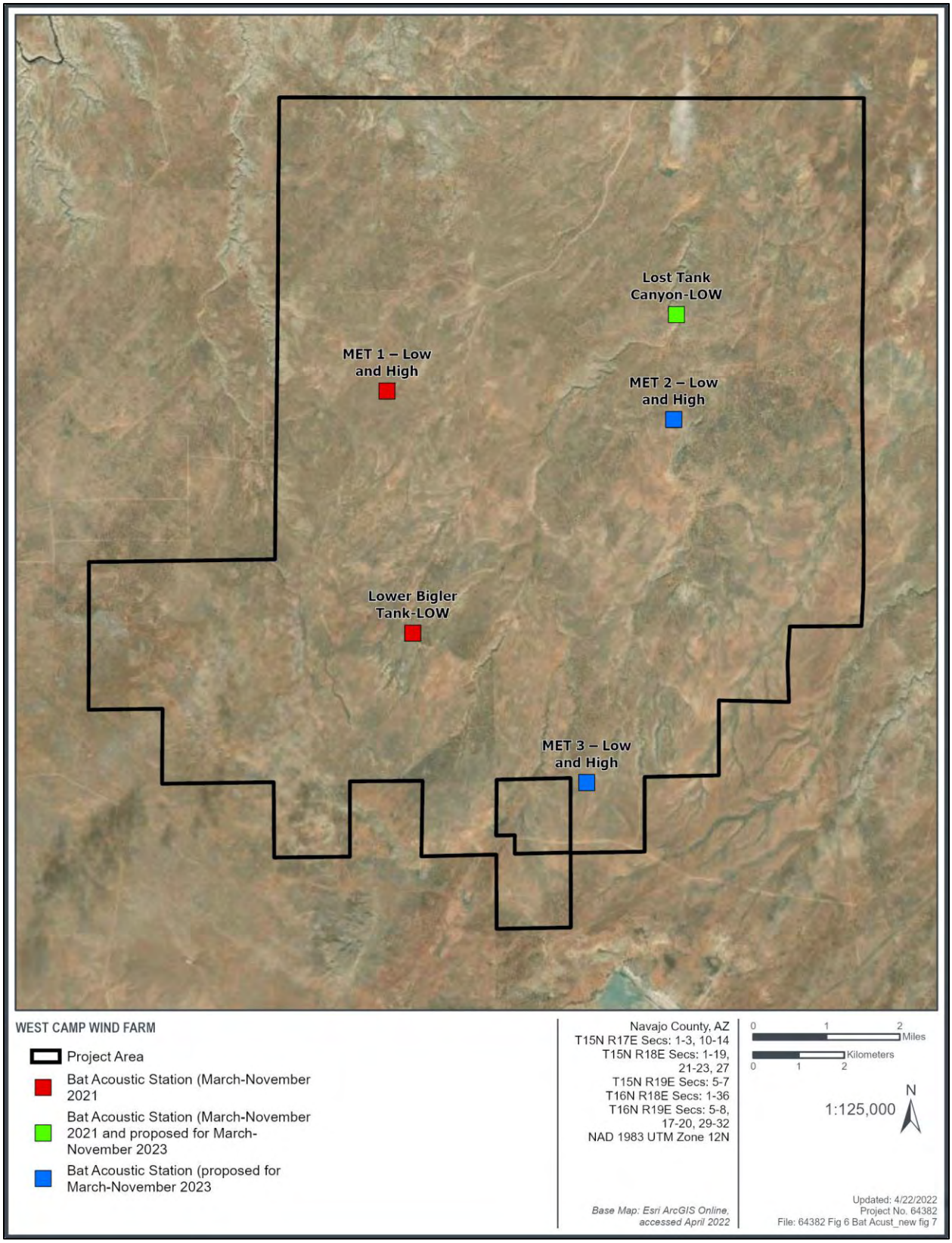

Figure 7. Bat acoustic station locations.

5.3 Data Interpretation/Analysis

The basic unit of measurement for assessing bat activity is the number of bat passes per species (or species group) per unit time (night). A bat pass is defined as one or more echolocation calls recorded on a given sound recording file (i.e., recorded within the predefined 2-second trigger window and 5- second maximum file length) (Kerbiriou et al. 2019; Lausen et al. 2010).

Automated species identification will involve three steps: 1) noise scrubbing, 2) auto-identification, and 3) manual vetting. All files will be processed using Kaleidoscope Pro. The software allows the user to perform noise scrubbing and auto-identification tasks in a single batch operation. To identify and separate non-bat extraneous noise files from those with bat echolocation calls, files will be scrubbed using the following signal parameters:[12]

- Frequency range: 8–120 kHz
- Call duration range: 2–500 ms
- Minimum number of pulses: 2
- Maximum inter-syllable gap: 1,000 ms
- Advanced signal processing: on

To limit species misclassifications resulting from the automated identification process, an experienced SWCA biologist will manually vet the data. This qualitative vetting will attempt to ensure that the auto- dentification classifier has not misclassified files based on poor recording quality, non-search phase components of calls, or echolocation calls from species other than the classifier-suggested species (Reichert et al. 2018). Manual vetting will eliminate noise sequences and verify probable presence of each species identified by the classifier.

Bat passes will be identified to species, when possible. Call ambiguity or quality (defined by files containing fewer than eight total call pulses and having a match ratio of less than 0.66) require that some passes be assigned to an appropriate phonic group (rather than to species). Phonic group categories will be based on the average characteristic frequency of each file calculated by the software and will generally align with foraging and morphology guilds (Müller et al. 2012; Roemer et al. 2017).

Compilations of the data will include bat passes per detector-night and relative passes, grouped spatially and temporally by species, species groups, and frequency groups. Seasons will be defined as described in Section 3.3. A relative pass is defined as the number of passes of a species or species group divided by the total number of passes of all species or species groups multiplied by 100 (expressed as a percentage).

6 INCIDENTAL WILDLIFE OBSERVATIONS

In an effort to collect data pertinent to potential eagle use and general wildlife use of the site, surveyors traveling on-site while conducting the above tasks have recorded and will continue to record:

- eagle flight paths and perch locations (for eagles detected while surveyors are conducting activities unrelated to eagle/large bird use counts [e.g., driving/hiking on-site]);[13]

[12] Signal parameters are based on manufacturer recommendation and regional expert guidance (personal communication, Janet Tyburec, Bat Survey Solutions, LLC, April 2018).

[13] Eagle flight paths will also be mapped during the standardized eagle and other large bird use surveys; they are distinguished from those recorded incidentally.

- burrowing owl (*Athene cunicularia*) locations and active/potentially active owl burrows;
- concentrated golden eagle prey (i.e., active prairie dog locations and occupied burrows);
- large carrion (e.g., dead cows, dead elk [*Cervus elaphus*]);
- bird nests (small bird nests or raptor/raven nests discovered prior to or missed during helicopter surveys);
- bird concentrations (i.e., flocks, migration events, waterfowl use of the site's water features); and
- a running list of bird species seen and heard.

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APPENDIX A

Eagle Breeding Area Data Provided by Arizona Game and Fish Department

Table A-1. Eagle Breeding Area Data Attributes Provided by AGFD, January 19, 2021.

Golden Eagle Breeding Area and Nest Data Near Proposed West Camp Wind Project, 2021.		
ID	Breeding Area	Occupancy
1	Chevelon Rock	Found in 2012; Active 2012; Unoccupied 2014, 2018, 2019. 9 nests
2	Porter Tank	Found in 2017. Potential nesting site with medium-large nest.
3	Bald Eagle Winter Count Route	0-3 Bald Eagles and 0-1 Golden eagles on annual 1 day counts.
4	Hopi Interest Lands	Due to proximity, coordination with Hopi advised.

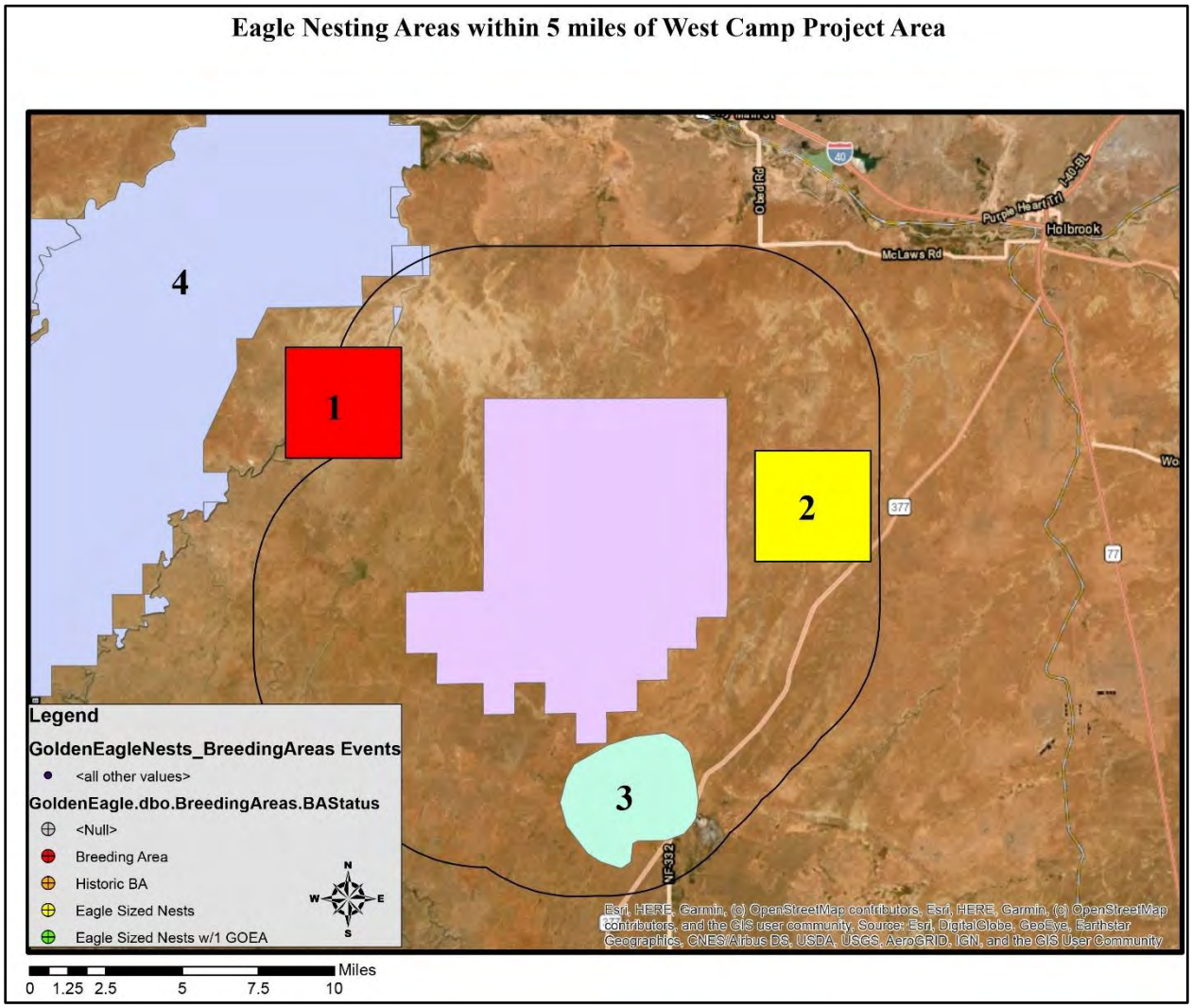

Figure A-1. Eagle breeding area spatial data provided by AGFD, January 19, 2021.

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EXHIBIT C

Areas of Biological Wealth

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EXHIBIT C. AREAS OF BIOLOGICAL WEALTH

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

> *Describe any areas in the vicinity of the proposed site or route which are unique because of biological wealth or because they are habitats for rare and endangered species. Describe the biological wealth or species involved and state effects, if any, the proposed facilities will have thereon.*

Introduction

Areas of biological wealth and rare and endangered species that may occur at or in the vicinity of the proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) were identified through a biotic resource review conducted by SWCA Environmental Consultants (SWCA). The data sources consulted for the review include:

- The U.S. Fish and Wildlife Service (USFWS) official species list obtained from the USFWS online Information for Planning and Consultation system (see Exhibit B, Attachment B-2, Appendix A) (USFWS 2022a).
- The USFWS Environmental Conservation Online System.
- The Arizona Game and Fish Department (AGFD) Arizona Environmental Review Tool Reports (see Exhibit B, Attachment B-2, Appendix B) (AGFD 2022a, 2022b) and online species abstracts (AGFD 2022c).
- Peer-reviewed papers and government agency documents describing species' range and habitat requirements.
- Communications with natural resource experts and wildlife agency personnel, including a meeting with AGFD and USFWS on May 18, 2022. A letter from the AGFD regarding the Gen-Tie Project is appended to this exhibit as Attachment C-1. Coordination with the AGFD is ongoing.

In addition, SWCA ecologists with expertise in the flora and fauna of the region have conducted, are in the process of conducting, or are under contract to conduct multiple surveys in the Wind Farm area (see Exhibit B).

Results

Areas of Biological Wealth

One area of biological wealth was identified within 3 miles of the Gen-Tie Project. The 4,650-acre Tanner Wash Area of Critical Environmental Concern (ACEC) is located approximately 1.0 mile northeast of the Cholla Substation, the terminus of the Gen-Tie Line Corridor to Cholla Substation. Created in 1989, the ACEC encompasses all known occupied habitat for the endangered Peebles Navajo cactus (*Pediocactus peeblesianus* var. *peeblesianus*) on federal land (USFWS 2008).

Federal Candidate and Listed Species

Nine federal candidate and listed species were identified by the USFWS (2022a) as having the potential to be affected by the Wind Farm project, including the Gen-Tie Project. These species are the California condor (*Gymnogyps californicus*), Chiricahua leopard frog (*Rana chiricahuensis*), gray wolf (Mexican wolf population, *Canis lupus baileyi*), Little Colorado spinedace (*Lepidomeda vittata*), Mexican spotted owl (*Strix occidentalis lucida*), monarch butterfly (*Danaus ple*xippus), northern Mexican gartersnake (*Thamnophis eques megalops*), Peebles Navajo cactus, and yellow-billed cuckoo (*Coccyzus americanus*). The federal and state listing status of these species and the likelihood of their occurring in the Gen-Tie Project area are presented in Table C-1. Information about the species' predicted range and habitat requirements can be found in the Wildlife Site Characterization for the West Camp Wind Farm, which has been included in this application as Exhibit B, Attachment B-2.

Based on species' predicted range and habitat requirements, SWCA biologists determined that two of the nine species (monarch butterfly and Peebles Navajo cactus) may occur in the Gen-Tie Project area (see Exhibit B, Attachment B-2 for the analysis). The other seven species are unlikely to be present (see Table C-1).

Table C-1. Occurrence Status of Federal Candidate and Listed Species

Common Name (*Scientific Name*)	Listing Status*	Occurrence Status
Amphibians		
Chiricahua leopard frog (*Rana chiricahuensis*)	T	**Unlikely to occur**. The Project is outside of the species' predicted range; no records within 10 miles.
Birds		
California condor (*Gymnogyps californicus*)	E, EXPN†	**Unlikely to occur**. No records within 10 miles. Based on current knowledge of the species' primary range and movements, the species is not expected to occur in the Gen-Tie Project area (personal communication, Tim Hauck, Condor Reintroduction Program Director, Peregrine Fund, with Allen Graber, Ecologist, SWCA, February 7, 2022).
Mexican spotted owl (*Strix occidentalis lucida*)	T	**Unlikely to occur**. Habitat is unsuitable or only marginally suitable; no records within 10 miles.
Yellow-billed cuckoo (*Coccyzus americanus*)	T	**Unlikely to occur**. Project is outside of the species' predicted range; no records within 10 miles; riparian habitats where the Gen-Tie Line Corridor to Cholla Substation would span the Little Colorado River are sparse and unlikely to support migrating individuals.
Fishes		
Little Colorado spinedace (*Lepidomeda vittata*)	T	**Unlikely to occur**. The Project is outside of the species' AGFD predicted range and USFWS current occupied habitat. Critical habitat occurs approximately 6 miles northwest of the Gen-Tie Project.
Insects		
Monarch butterfly (*Danaus ple*xippus)	C	**May occur**. See description below.
Mammals		
Gray wolf, Mexican wolf population (*Canis lupus baileyi*)	E, EXPN‡	**Unlikely to occur**. Because the species' current occupied range is 20 miles to the southeast and 27 miles to the west, including canyons and highways in between, it is unlikely young wolves disperse from core areas to the Gen-Tie Project area.

Common Name (*Scientific Name*)	Listing Status*	Occurrence Status
Plants		
Peebles Navajo cactus (*Pediocactus peeblesianus* var. *peeblesianus*)	E	**May Occur**. See description below.
Reptiles		
Northern Mexican gartersnake (*Thamnophis eques megalops*)	T	**Unlikely to occur**. The Project is outside of the species' predicted range; no records within 10 miles.

Note: The table lists the species named in the USFWS official species list (USFWS 2022a). Information regarding records from within 10 miles of the Wind Farm project area is from AGFD 2022a; information about species range and habitat requirements and the occurrence analysis can be found in Exhibit B, Attachment B-2.

* Status abbreviations: C = Candidate; E = Endangered; EXPN = Experimental population, 10(j) non-essential; T = Threatened.

† The project area is outside of the condor's designated 10(j) non-essential experimental population (NEP) area, which is located north of Interstate Highway 40. Condors outside of the NEP area are treated as endangered species.

‡ The project area is within the Mexican wolf's NEP area. Under Section 9 of the Endangered Species Act, members of NEP populations within designated NEP areas are treated as species proposed for listing.

Monarch Butterfly

The monarch butterfly is a federal candidate species (USFWS 2022a). In the summer, these butterflies are found across Arizona in a variety of habitats, where they produce multiple generations each year. Their larvae are obligate feeders on plants in the Asclepiadaceae family, primarily species of milkweeds. In the fall, monarch butterflies migrate to coastal areas in California or Mexico or to Arizona's low deserts. Along the way, they consume nectar from a variety of native plants, including sunflowers (*Helianthus* spp.), rabbitbrush (*Ericameria* spp.), thistles (Family Asteraceae), and milkweeds (Morris et al. 2015). In early spring, surviving monarchs break diapause, begin breeding and dispersing, and their offspring start the cycle of generational migration over again. The Gen-Tie Project is within the monarch butterfly's breeding and migration range (USFWS 2022b), and milkweed and nectar plant species have been observed during preconstruction surveys at the Wind Farm Site and may also be present in the Gen-Tie Line Corridor to Cholla Substation.

Peebles Navajo Cactus

The Peebles Navajo cactus is a federally listed endangered species and a state Highly Safeguarded native plant. It is a very small, solitary or rarely clustered, globose cactus up to 1.0 inch in height and 0.6 to 1.0 inch in diameter. The species retracts into the soil during dry weather. That and the plant's small size make it difficult to detect except when it is flowering in April and early May (AGFD 2009). The species is a narrow endemic (having a 1 mile-wide × 7-mile-long distribution) extending northwest to southeast within the immediate vicinity of Joseph City and Holbrook, north of the Little Colorado River. It is found in soils described as shallow to deep, well to extremely well drained, and that formed in mixed alluvium belonging to the Gypsiorthids-Torriorthents-Haplargids Association (Phillips and Phillips 1995 as cited in USFWS 2008). Soil conditions have variously been described as gravelly alluvium derived from the Shinarump conglomerate member of the Chinle Formation; very coarse sand to cobble gravel deposits unconformably overlying finer grained facies of the Chinle Formation; and weakly alkaline, gravelly soils in Little Colorado River paleochannels (AGFD 2009).

The Peebles Navajo cactus has been documented within 3 miles of the Gen-Tie Project (AGFD 2022b). Information provided by the USFWS (2022c) indicates that the northern extreme of the Gen-Tie Line Corridor to Cholla Substation is within the species' range; however, the area does not appear to contain appropriate soil conditions (i.e., Chinle Formation, Gypsiorthids-Torriorthents Association, gravelly soils) as mapped by the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2022).

However, due to the proximity of appropriate soil conditions and known populations north of the Little Colorado River, and the fact that appropriate soil conditions may be present locally (at a finer scale than the NRCS's mapping), the species' occurrence may not be ruled out. The Infrastructure Siting Area and Wind Farm Site are well outside of the species' range.

Other Special-Status Wildlife Species

Other categories of special status species include:

- Eagles protected by the Bald and Golden Eagle Protection Act (Eagle Act).
- Birds of Conservation Concern (BCC), which are bird species, beyond those designated as federally threatened or endangered, that represent the USFWS's highest conservation priorities.
- Species of Greatest Conservation Need (SGCN) in Arizona, which are species identified by the AGFD as warranting heightened attention because of low and declining populations. Tier 1A SGCN are those for which the AGFD has entered into an agreement or has legal or other contractual obligations or warrants the protection of a closed season. This tier includes all federally threatened and endangered species. Tier 1B represents the remainder of the species meeting the AGFD's vulnerability criteria. Tier 1C species are those for which existing data were insufficient to score one or more vulnerability criteria.

The AGFD (2022a, 2022b) provided lists of special-status species that intersect with the Gen-Tie Project footprint based on predicted range models. SWCA biologists then determined which of those species may occur in the Gen-Tie Project vicinity based on habitat and more precise range requirements (see Exhibit B, Attachment B-2 for the analysis). The eagles, BCC, and SGCN Tier 1A and Tier 1B species that may occur or are known to occur because they were observed during preconstruction surveys are identified in Table C-2. The table also includes two special-status species, Bendire's thrasher (*Toxostoma bendirei*) and broad-tailed hummingbird (*Selasphorus platycercus*), that did not appear on the AGFD list but were observed in the field.

Table C-2. Occurrence Status of Other Relevant Special-Status Species

Common Name (*Scientific Name*)	Status*		Occurrence Status
	Federal	State	
Amphibians			
Northern leopard frog (*Lithobates pipiens*)	–	SGCN (1A)	May occur
Birds			
American peregrine falcon (*Falco peregrinus anatum*)	–	SGCN (1A)	Known to occur, observed during surveys
Bald eagle (*Haliaeetus leucocephalus*)	Eagle Act, BCC	SGCN (1A)	Known to occur, observed during surveys
Bendire's thrasher (*Toxostoma bendirei*)	BCC	SGCN (1C)	Known to occur, observed during surveys
Broad-tailed hummingbird (*Selasphorus platycercus*)	BCC	--	Known to occur, observed during surveys
Common nighthawk (*Chordeiles minor*)	–	SGCN (1B)	Known to occur, observed during surveys
Ferruginous hawk (*Buteo regalis*)	–	SGCN (1B)	Known to occur, observed during surveys

Common Name (*Scientific Name*)	Status*		Occurrence Status
	Federal	State	
Golden eagle (*Aquila chrysaetos*)	Eagle Act, BCC	SGCN (1B)	Known to occur, observed during surveys
Lincoln's sparrow (*Melospiza lincolnii*)	–	SGCN (1B)	May occur
Pinyon jay (*Gymnorhinus cyanocephalus*)	BCC	SGCN (1B)	Known to occur, observed during surveys
Yellow warbler (*Setophaga petechia*)	–	SGCN (1B)	May occur
Mammals			
American pronghorn (*Antilocapra americana americana*)	–	SGCN (1B)	Known to occur, observed during surveys
Arizona myotis (*Myotis occultus*)	–	SGCN (1B)	May occur
Brazilian free-tailed bat (*Tadarida brasiliensis*)	–	SGCN (1B)	May occur
Gunnison's prairie dog (*Cynomys gunnisoni*)	–	SGCN (1B)	May occur
Kit fox (*Vulpes macrotis*)	–	SGCN (1B)	May occur
Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)	–	SGCN (1B)	May occur
Spotted bat (*Euderma maculatum*)	–	SGCN (1B)	May occur
Springerville pocket mouse (*Perognathus flavus goodpasteri*)	–	SGCN (1B)	May occur
Stephen's woodrat (*Neotoma stephensi*)	–	SGCN (1B)	May occur
Yuma myotis (*Myotis yumanensis*)	–	SGCN (1B)	May occur
Reptiles			
Pai striped whiptail (*Aspidoscelis pai*)	–	SGCN (1B)	May occur

Note: Table includes those SCGN Tier 1A and 1B species and BCC listed in AGFD (2022a, 2022b) that may occur or are known to occur in the Wind Farm area, including the Gen-Tie Project area.

* Status abbreviations: BCC = Bird of Conservation Concern; Eagle Act = Bald and Golden Eagle Protection Act; SGCN = Species of Greatest Conservation Need.

Eagles

The Gen-Tie Project is within the year-round range for the golden eagle (*Aquila chrysaetos*) and the non-breeding/limited breeding range for the bald eagle (*Haliaeetus leucocephalus*). Golden eagles and bald eagles have been observed on-site during preconstruction surveys (see Table C-2).

Birds of Conservation Concern (BCC)

Five BCC species have been observed during preconstruction surveys in the vicinity of the Gen-Tie Project (see Table C-2). They are the bald eagle, Bendire's thrasher, broad-tailed hummingbird, golden eagle, and pinyon jay (*Gymnorhinus cyanocephalus*).

Species of Greatest Conservation Need (SGCN)

Twenty species categorized as SGCN 1A or 1B may occur or are known to occur in the vicinity of the Gen-Tie Project area, including one amphibian, eight birds, 10 mammals, and one reptile (see Table C-2). Of these, eight species have been observed during preconstruction surveys. They are the American peregrine falcon (*Falco peregrinus anatum*), American pronghorn (*Antilocapra americana americana*), bald eagle, Bendire's thrasher, common nighthawk (*Chordeiles minor*), ferruginous hawk (*Buteo regalis*), golden eagle, and pinyon jay.

State-Protected Native Plant Species

The Arizona Native Plant Law (Arizona Revised Statutes 3-904) (ANPL) identifies a lengthy list of plant species—largely cacti, agaves, yuccas, and desert trees—that are susceptible to removal for collection, landscaping, sale, or other commercial uses. The ANPL states that these plants shall not be taken, transported, or possessed from any land without permission and a permit from the Arizona Department of Agriculture (ADA); it also requires notification prior to land clearing even if the plants will be destroyed. ANPL status categories include:

- Highly Safeguarded: no collection allowed
- Salvage Restricted: collection only with permit
- Export Restricted: transport out of State prohibited
- Salvage Assessed: permits required to remove live trees
- Harvest Restricted: permits required to remove plant by-products

One Highly Safeguarded species (Peebles Navajo cactus, also federally endangered) and two Salvage Restricted species (roundleaf errazuizia [*Errazurizia rotundata*] and Whipple's fishhook cactus [*Sclerocactus whipplei*]) have been documented within 3 miles of the Gen-Tie Line Corridor to Cholla Substation (AGFD 2022b). A third Salvage Restricted species (grama-grass cactus [*Sclerocactus papyracanthus*]) was both identified by the AGFD (2022a) as occurring within 10 miles of the Gen-Tie Project area and observed during preconstruction surveys.

Summary of Potential Effects

Areas of Biological Wealth

The Tanner Wash ACEC lies approximately 1.0 mile north of the Cholla Substation. It would not be crossed by the Gen-Tie Project and, as such, would not be affected.

Federal Candidate and Listed Species

Monarch Butterfly

Milkweed and nectar plants potentially used by monarch butterflies may be temporarily or permanently removed during ground-disturbing activities at construction sites. The number of milkweed and nectar plants potentially lost, however, would amount to an insignificant reduction in the abundance of such plants in the general area.

Peebles Navajo Cactus

If transmission towers are constructed in gravelly soil within the Peebles Navajo cactus range as defined by the USFWS (2022c), individual cactus plants, if present and undetected, could be destroyed. Site-specific soil typing and surveys for the species may be used to inform Gen-Tie Line siting to avoid impacting the species.

Other Special-Status Wildlife Species

The northern leopard frog (*Lithobates pipiens*) is unlikely to be affected by the Gen-Tie Project because no ground disturbance is planned to take place in or near habitat where amphibians may occur (e.g., stock tanks). Other special-status species listed in Table C-2 may be affected by the Gen-Tie Project as discussed below, but none of the species are likely to be substantially affected.

- Construction-related activity and noise may disturb wildlife species in the area and cause them to avoid or move away from the site or temporarily alter their behavior in other ways (e.g., remain underground). Once construction is completed, it is expected that wildlife would return to the area and resume normal behavior patterns.
- Ground-dwelling animals (e.g., woodrats and pocket mice) in areas of ground disturbance could be injured or killed during construction. Gunnison's prairie dog (*Cynomys gunnisoni*) colonies will be avoided to the extent practicable to minimize risk to this species.
- Ground-nesting birds could be disturbed during construction and their nests, eggs, or young destroyed. Migratory Bird Treaty Act surveys will be conducted prior to ground-disturbing activities during the spring nesting season to avoid impacts to nesting migratory birds.
- Removal of vegetation associated with clearing portions of the transmission line right-of-way, placement of towers, and construction of associated facilities would result in loss of habitat that could provide nesting sites, cover, and/or forage for bird and mammal species or their prey. The acreage of vegetation to be cleared is small, however, particularly relative to the large amount of comparable habitat available in and around the alternative routes. Removal of vegetation is expected to have negligible effect on special-status species.
- Transmission lines do not appear to affect most wildlife movements (Lee and BPA Biological Studies Task Team 1989; Thompson 1977).
- Transmission lines pose a risk of collisions and electrocution for birds, particularly eagles and other raptors. To minimize that risk, the Applicant will construct the proposed transmission line following the guidelines outlined in *Suggested Practices for Raptor Protection on Powerlines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012).
- Impacts of the Gen-Tie Project to bats are expected to be negligible because bats are well adapted to avoid stationary objects by using echolocation.

State-Protected Native Plant Species

Potential effects of the proposed Gen-Tie Project on plant species protected under the ANPL include direct removal during vegetation-clearing activities. In accordance with the ANPL requirements on private land, the ADA will be notified 30 days before these plants are destroyed over an area of at least 1 acre but less than 40 acres, and 60 days before plants are destroyed over an area of 40 acres or more. Refer to the discussion above regarding the Peebles Navajo cactus (Highly Safeguarded species).

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EXHIBIT C – ATTACHMENT C-1

Letter from the Arizona Game and Fish Department, August 4, 2022

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August 4, 2022

Mr. Rob Gardner
Developer, Western Wind Development
AES Clean Energy, LLC
282 Century Pl #2000
Louisville, Colorado 80027

Electronically submitted to Robert.Gardner@aes.com and agraber@swca.com

RE: West Camp Wind Farm Certificate of Environmental Compatibility

Dear Mr. Gardner:

The Arizona Game and Fish Department (Department) appreciates the opportunity to review the notice of intent to file an application for a Certificate of Environmental Compatibility (CEC) to the Arizona Corporation Commission for a proposed generation-tie (gen-tie) transmission line for the West Camp Wind Farm. The Department understands that three alternate routes on private lands are being considered for the gen-tie; one would interconnect at the Cholla Substation, and the other two would interconnect via a line-tap to an existing transmission line within the wind farm project area. The wind farm site is located approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona.

Under Title 17 of the Arizona Revised Statutes, the Department, by and through the Arizona Game and Fish Commission (Commission), has jurisdictional authority and public trust responsibilities to conserve and protect the state fish and wildlife resources. In addition, the Department manages threatened and endangered species through authorities of Section 6 of the Endangered Species Act and the Department's Section 10(a)(1)(A) permit. It is the mission of the Department to conserve and protect Arizona's diverse fish and wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations. The Department supports the development of wind energy as a source of clean and renewable energy and believes that, with proper placement and planning, the benefits of wind energy can outweigh potential negative effects to wildlife populations.

Given the information provided, the Department provides the following comments based on the agency's statutory authorities, public trust responsibilities, and special expertise related to wildlife resources and recreation:

- The Department supports the selection of one of the alternatives that would interconnect with an existing transmission line in the wind farm footprint to reduce the amount of

wildlife habitat affected, and potential wildlife interactions, since fewer poles and shorter wire lengths would be needed on the landscape.

- Raptors are vulnerable to powerline strikes and electrocution during construction and operation of transmission lines; power poles can also serve as perches for birds of prey. The Department recommends implementing appropriate design features for these structures to minimize impacts to these important species, including avian flight diverters where the line would cross the Little Colorado River. Because eagles are known to occur in the area, the Department also recommends following standards established by the Avian Power Line Interaction Committee (APLIC) for eagle-sized raptors along the full gen-tie route; these can be found in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*[1] and *Reduced Avian Collisions with Power Lines: The State of the Art in 2012*[2]. Tuk Jacobson, the Department's raptor expert, can provide further information on specific design features and best management practices for the gen-tie; he can be contacted at raptors@azgfd.gov or 623-236-7575.
- Based on information provided in the raptor nest survey report and the wildlife site characterization report, the Department recommends maintaining a 0.25-mile buffer around raptor nests and planning construction activities for the non-breeding season.
- As noted in the wildlife site characterization report, habitat for monarch butterflies, which are a candidate for listing under the Endangered Species Act, occurs along the proposed gen-tie routes. The Department recommends avoiding the removal of any milkweed or other flowering plants that could be used by monarchs, to the extent possible, and revegetating disturbed areas with pollinator-friendly seed mixes that are native to the area.

Thank you for the opportunity to provide input on the West Camp Wind Farm gen-tie proposal. For further coordination, please contact Tiffany Sprague at tsprague@azgfd.gov or 623-236-7222.

Sincerely,

Luke Thompson
Habitat, Evaluation, and Lands Branch Chief

cc: David Dorum, Region I Habitat, Evaluation, and Lands Program Supervisor
Ginger Ritter - Project Evaluation Program Supervisor
Tiffany Sprague - Project Evaluation Program Specialist

AZGFD #M22-07264930

[1] https://www.aplic.org/uploads/files/2643/SuggestedPractices2006(LR-2).pdf
[2] https://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf

EXHIBIT D

Biological Resources

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EXHIBIT D. BIOLOGICAL RESOURCES

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

> *List the fish, wildlife, plant life, and associated forms of life in the vicinity of the proposed site or route and describe the effects, if any, the proposed facilities will have thereon.*

Introduction

To identify the wildlife and plant species that may occur in the vicinity of the West Camp Wind Gen-Tie Project (Gen-Tie Project), SWCA Environmental Consultants (SWCA) consulted publicly available data sources, including the following:

- Southwest Regional Gap Analysis Project land cover dataset (U.S. Geological Survey 2016)
- *Ecoregional Animal-Habitat Models for the Southwestern United State*s (Boykin 2007)
- *Biotic Communities: Southwestern United States and Northwestern Mexico* (Brown 1994)
- Regional checklists, reports, and publications (e.g., Brennan 2008–2012; eBird 2022; Hoffmeister 1986; U.S. Army Corps of Engineers 2018; Young et al. 2009)

SWCA also completed a Wildlife Site Characterization for the West Camp Wind Farm, which is included in this application as Exhibit B, Attachment B-2. To "ground-truth" available desktop information and evaluate habitat associations and wildlife site characterization objectives, two SWCA biologists with expertise in the ecology of the regional wildlife community conducted a reconnaissance visit to the Wind Farm project area on January 27, 2022. This visit was in addition to preconstruction wildlife surveys in the area, which included:

- 2 years of avian use surveys conducted monthly[1] at fixed points distributed throughout the Wind Farm Site from October 2019 through September 2021;
- raptor nest surveys within 2 miles of the Wind Farm Site in February and March 2021; and
- bat acoustic surveys at fixed stations from March through November 2021, at which avian surveyors maintained the bat acoustic units monthly.

Wildlife and plant species observed during these site visits are noted in the species lists provided at the end of this exhibit.

Results

Vegetation Communities

Four vegetation communities dominate the Gen-Tie Project area:

- Inter-Mountain Basins Semi-Desert Grassland
- Colorado Plateau Pinyon-Juniper Woodland

[1] Avian use surveys were conducted every month in the 2-year span except March 2020.

- Inter-Mountain Basins Juniper Savanna
- Inter-Mountain Basins Semi-Desert Shrub Steppe

Grasslands and shrublands dominate the northern portions of Gen-Tie Project area, while juniper savanna and pinyon-juniper woodlands are concentrated in the southern portions. Patches of Invasive Southwestern Riparian Woodland and Inter-Mountain Basins Salt Desert Scrub characterize Obed Meadow, a low-lying peat bog approximately 1.8 miles southwest of the Cholla Substation. Additional areas of invasive riparian woodland and salt desert scrub are found along the Little Colorado River channel immediately south of the Cholla Substation.

Plant Species

The project area is dominated by graminoids and forbs with an open shrub and tree layer. Denser juniper woodlands are present, particularly along drainages. The dominant juniper species observed by SWCA biologists during site visits was oneseed juniper (*Juniperus monosperma*), with occasional twoneedle pinyon pines (*Pinus edulis*) interspersed. Characteristic grasses found throughout the site include mesa dropseed (*Sporobolus flexuosus*), sand dropseed (*Sporobolus cryptandrus*), spike dropseed (*Sporobolus contractus*), blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), and ring muhly (*Muhlenbergia torreyi*). Shrubs observed include fourwing saltbush (*Atriplex canescens*), winterfat (*Krascheninnikovia lanata*), snakeweed (*Gutierrezia* sp.), Fremont's mahonia (*Mahonia fremontii*), Bigelow sage (*Artemisia bigelovii*), jointfir (*Ephedra* spp.), globemallow (*Sphaeralcea* spp.), Stansbury cliffrose (*Purshia stansburiana*), prickly Russian thistle (*Salsola tragus*), Whipple cholla (*Cylindropuntia whipplei*), narrowleaf yucca (*Yucca angustissima*), banana yucca (*Yucca baccata*), and pricklypear (*Opuntia* spp.).

Wildlife Species

Wildlife species that may or are known to occur in the project vicinity are listed in Table D-1 (fish), Table D-2 (amphibians and reptiles), Table D-3 (birds), and Table D-4 (mammals). Species observed during SWCA's site visits are included in the tables and marked with an asterisk. These tables are provided following the Summary of Potential Effects section below.

Summary of Potential Effects

Plant Species

Construction of the proposed Gen-Tie Project will result in permanent disturbance of up to approximately 24 acres. Native vegetation characteristic of the semi-desert grassland and shrub steppe, juniper savanna, and pinyon-juniper woodland communities is extensive in northern Arizona, and the acreage of disturbance as a percentage of the remaining habitat is very small. The removal of up to approximately 24 acres of vegetation will not result in significant impacts to any single plant species or to vegetation communities as a whole. Standard best management practices (BMPs) will be employed during construction to minimize the introduction and spread of noxious weeds.

Wildlife Species

Fish are present in the Little Colorado River when it intermittently flows and may be present in remnant pools when it is not, but they will not be affected by the Gen-Tie Project. The Gen-Tie Line will span the river. No construction will take place in or directly adjacent to the river channel.

Wildlife species listed in Tables D-2 through D-4 may be affected by the Gen-Tie Project as discussed below, but none of the species are likely to be substantially affected.

- Construction-related activity and noise may disturb wildlife species in the area, including big game species like pronghorn (*Antilocapra americana*), and cause them to avoid or move away from the site or temporarily alter their behavior in other ways. Once construction is completed, it is expected that wildlife will return to the area and resume normal behavior patterns.
- Ground-dwelling animals (e.g., snakes and woodrats) in areas of ground disturbance could be injured or killed during construction. Prairie dog colonies will be avoided to the extent practicable to minimize the risk to this species.
- Ground- and shrub-nesting birds could be disturbed during construction, and their nests, eggs, or young destroyed. Migratory Bird Treaty Act surveys will be conducted prior to ground-disturbing activities during the spring nesting season to avoid impacts to nesting migratory birds.
- Removal of vegetation associated with clearing portions of the transmission line corridor, placement of support structures, and construction of associated facilities would result in a small loss of habitat that could provide nesting sites, cover, and/or forage for bird and mammal species or their prey. In temporarily disturbed areas along the transmission line corridor, species composition of birds and mammals using those areas may change over time as vegetation species and structure recover. The acreage of vegetation to be cleared is small, however, particularly relative to the large amount of comparable habitat available in and around the Gen-Tie Project footprint. Removal of vegetation is expected to have a negligible effect on wildlife species.
- There could be minor habitat fragmentation and edge effects, particularly in the relatively small areas of juniper woodland that may be crossed by the Gen-Tie Line, depending on the route selected.
- Transmission lines do not appear to affect most wildlife movements (Lee and BPA Biological Studies Task Team 1989; Thompson 1977).
- The effects of exposure to electromagnetic fields (EMF) by birds nesting near power lines is largely unknown; however, in one study, Fernie at al. (2000) found that EMF exposure affected the reproductive success of kestrels, increasing fertility, egg size, embryonic development, and fledging success, but reducing hatching success.
- Transmission lines pose a risk of collisions and electrocution for birds, particularly eagles and other raptors. To minimize that risk, the Applicant will construct the proposed transmission line following the guidelines outlined in *Suggested Practices for Raptor Protection on Powerlines: The State of the Art in 2006* (Avian Powerline Interaction Committee [APLIC] 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012).
- Impacts of the Gen-Tie Project to bats are expected to be negligible because bats are well adapted to avoid stationary objects by using echolocation.

Table D-1. Fish Species Documented in the Little Colorado River in the Project Vicinity

Common Name (*Scientific Name*)	Common Name (*Scientific Name*)
Bluegill (*Lepomis macrochirus*)	Flannelmouth sucker (*Catostomus latipinnis*)
Channel catfish (*Ictalurus punctatus*)	Green sunfish (*Lepomis cyanellus*)
Common carp (*Cyprinus carpio*)	Plains killifish (*Fundulus zebrinus*)
Fathead minnow (*Pimephales promelas*)	Red shiner (*Cyprinella lutrensis*)

Source: U.S. Army Corps of Engineers (2018)

Table D-2. Amphibian and Reptile Species That May Occur in the Project Vicinity

Common Name (*Scientific Name*)	Common Name (*Scientific Name*)
Amphibians	
Barred tiger salamander (*Ambystoma mavortium*)	Northern leopard frog (*Lithobates pipiens*)
Canyon treefrog (*Dryophytes arenicolor*)	Plains spadefoot (*Spea bombifrons*)
Chiricahua leopard frog (*Lithobates chiricahuensis*)	Red-spotted toad (*Anaxyrus punctatus*)
Great plains toad (*Anaxyrus cognatus*)	Woodhouse's toad (*Anaxyrus woodhousii*)
New Mexico spadefoot (*Spea multiplicata*)	
Lizards	
Lesser earless lizard (*Holbrookia maculata*)	Long-nosed leopard lizard (*Gambelia wislizenii*)
Sagebrush lizard (*Sceloporus graciosus*)	Many-lined skink (*Plestiodon multivirgatus*)
Common side-blotched lizard (*Uta stansburiana*)	Ornate tree lizard (*Urosaurus ornatus*)
Desert spiny lizard (*Sceloporus magister*)	Plateau fence lizard (*Sceloporus tristichus*)
Eastern collared lizard (*Crotaphytus collaris*)	Plateau striped whiptail (*Aspidoscelis velox*)
Short-horned lizard (*Phrynosoma hernandesi*)	Pai-striped whiptail (*Aspidoscelis pai*)
Snakes	
Gophersnake (*Pituophis catenifer*)	Eastern kingsnake (*Lampropeltis getula*)
Glossy snake (*Arizona elegans*)	Milksnake (*Lampropeltis triangulum*)
Striped whipsnake (*Coluber taeniatus*)	Terrestrial gartersnake (*Thamnophis elegans*)
Chihuahuan nightsnake (*Hypsiglena jani*)	Prairie rattlesnake (*Crotalus viridis*)

Table D-3. Bird Species That May or Are Known to Occur in the Project Vicinity. An Asterisk (*) Denotes Species Observed During Preconstruction Surveys.

Common Name (*Scientific Name*)	Common Name (*Scientific Name*)
American kestrel (*Falco sparverius*)*	Band-tailed pigeon (*Patagioenas fasciata*)
American robin (*Turdus migratorius*)*	Barn swallow (*Hirundo rustica*)*
Ash-throated flycatcher (*Myiarchus cinerascens*)*	Bendire's thrasher (*Toxostoma benderei*)*
Bald eagle (*Haliaeetus leucocephalus*)	Bewick's wren (*Thryomanes bewickii*)*
Black-chinned hummingbird (*Archilochus alexandri*)	Hermit thrush (*Catharus guttatus*)
Black-headed grosbeak (*Pheucticus melanocephalus*)	Horned lark (*Eremophila alpestris*)*
Black-throated gray warbler (*Setophaga nigrescens*)	House finch (*Haemorhous mexicanus*)*
Black-throated sparrow (*Amphispiza bilineata*)*	House wren (*Troglodytes aedon*)
Blue grosbeak (*Passerina caerulea*)	Juniper titmouse (*Baeolophus ridgwayi*)
Blue-gray gnatcatcher (*Polioptila caerulea*)	Loggerhead shrike (*Lanius ludovicianus*)*
Brewer's blackbird (*Euphagus cyanocephalus*)*	MacGillivray's warbler (*Geothlypis tolmiei*)
Brewer's sparrow (*Spizella breweri*)*	Merlin (*Falco columbarius*)*
Broad-tailed hummingbird (*Selasphorus platycercus*)*	Mountain bluebird (*Sialia currucoides*)*
Brown creeper (*Certhia americana*)	Mountain chickadee (*Poecile gambeli*)
Brown-headed cowbird (*Molothrus ater*)*	Mourning dove (*Zenaida macroura*)*
Burrowing owl (*Athene cunicularia*)	Northern flicker (*Colaptes auratus*)*
Bushtit (*Psaltriparus minimus*)	Northern harrier (*Circus hudsonius*)*

Common Name (*Scientific Name*)	Common Name (*Scientific Name*)
Canyon towhee (*Melozone fusca*)*	Northern mockingbird (*Mimus polyglottos*)*
Canyon wren (*Catherpes mexicanus*)	Northern rough-winged swallow (*Stelgidopteryx serripennis*)
Cassin's finch (*Haemorhous cassinii*)	Northern shoveler (*Spatula clypeata*)
Cassin's kingbird (*Tyrannus vociferans*)*	Orange-crowned warbler (*Oreothlypis celata*)
Cedar waxwing (*Bombycilla cedrorum*)	Peregrine falcon (*Falco peregrinus*)
Chestnut-collared longspur (*Calcarius ornatus*)	Pine siskin (*Spinus pinus*)*
Chipping sparrow (*Spizella passerina*)*	Pinyon jay (*Gymnorhinus cyanocephalus*)*
Cliff swallow (*Petrochelidon pyrrhonota*)*	Plumbeous vireo (*Vireo plumbeus*)
Common nighthawk (*Chordeiles minor*)*	Prairie falcon (*Falco mexicanus*)
Common raven (*Corvus corax*)*	Purple Martin (*Progne subis*)*
Cooper's hawk (*Accipiter cooperii*)*	Pygmy nuthatch (*Sitta pygmaea*)
Crissal thrasher (*Toxostoma crissale*)*	Red crossbill (*Loxia curvirostra*)
Dark-eyed junco (*Junco hyemalis*)*	Red-breasted nuthatch (*Sitta canadensis*)
Eastern meadowlark (*Sturnella magna*)*	Red-tailed hawk (*Buteo jamaicensis*)*
Evening grosbeak (*Coccothraustes vespertinus*)	Rock wren (*Salpinctes obsoletus*)*
European starling (*Sturnus vulgaris*)	Ruby-crowned kinglet (*Regulus calendula*)*
Ferruginous hawk (*Buteo regalis*)*	Sage thrasher (*Oreoscoptes montanus*)*
Golden eagle (*Aquila chrysaetos*)*	Say's phoebe (*Sayornis saya*)*
Gray flycatcher (*Empidonax wrightii*)*	Scott's oriole (*Icterus parisorum*)*
Gray vireo (*Vireo vicinior*)	Sharp-shinned hawk (*Accipiter striatus*)
Great horned owl (*Bubo virginianus*)	Spotted towhee (*Pipilo maculatus*)*
Greater roadrunner (*Geococcyx californianus*)	Steller's jay (*Cyanocitta stelleri*)
Great-tailed grackle (*Quiscalus mexicanus*)	Swainson's hawk (*Buteo swainsoni*)*
Green-winged teal (*Anas crecca*)*	Townsend's solitaire (*Myadestes townsendi*)
Hairy woodpecker (*Dryobates villosus*)	Townsend's warbler (*Setophaga townsendi*)
Turkey vulture (*Cathartes aura*)*	White-breasted nuthatch (*Sitta carolinensis*)
Vesper sparrow (*Pooecetes gramineus*)*	White-crowned sparrow (*Zonotrichia leucophrys*)*
Violet-green swallow (*Tachycineta thalassina*)	White-throated swift (*Aeronautes saxatalis*)*
Virginia's warbler (*Oreothlypis virginiae*)	Wilson's warbler (*Cardellina pusilla*)*
Western bluebird (*Sialia mexicana*)*	Woodhouse's scrub-jay (*Aphelocoma woodhouseii*)*
Western kingbird (*Tyrannus verticalis*)*	Yellow warbler (*Setophaga petechia*)
Western meadowlark (*Sturnella neglecta*)*	Yellow-rumped warbler (*Setophaga coronata*)*
Western wood-pewee (*Contopus sordidulus*)	Zone-tailed hawk (*Buteo albonotatus*)

Note: Table excludes several rare/uncommon species unless observed during pre-construction surveys.

* Species observed by SWCA during site visits

Table D-4. Mammal Species That May or Are Known to Occur in the Project Vicinity

Common Name (Scientific Name)	Common Name (Scientific Name)
Allen's big-eared bat (*Idionycteris phyllotis*)	Greater bonneted bat (*Eumops perotis*)
American badger (*Taxidea taxus*)	Gunnison's prairie dog (*Cynomys gunnisoni*)

Common Name (Scientific Name)	Common Name (Scientific Name)
American black bear (*Ursus americanus*)	Hoary bat (*Lasiurus cinereus*)
American hog-nosed skunk (*Conepatus leuconotus*)	Javelina (*Pecari tajacu*)
American pronghorn (*Antilocapra americana*)*	Kit fox (*Vulpes macrotis*)
Arizona myotis (*Myotis occultus*)	Long-eared myotis (*Myotis evotis*)
Big brown bat (*Eptesicus fuscus*)	Long-legged myotis (*Myotis volans*)
Big free-tailed bat (*Nyctinomops macrotis*)	Merriam's shrew (*Sorex merriami*)
Black-tailed jackrabbit (*Lepus californicus*)	Mexican vole (*Microtus mexicanus*)
Bobcat (*Lynx rufus*)	Mexican woodrat (*Neotoma mexicana*)
Botta's pocket gopher (*Thomomys bottae*)	Mountain lion (*Puma concolor*)
California myotis (*Myotis californicus*)	Mule deer (*Odocoileus hemionus*)
Canyon bat (*Parastrellus hesperus*)	North American deermouse (*Peromyscus maniculatus*)
Brazilian free-tailed bat (*Tadarida brasiliensis*)	North American porcupine (*Erethizon dorsatum*)
Brush deermouse (*Peromyscus boylii*)	Northern grasshopper mouse (*Onychomys leucogaster*)
Bushy-tailed woodrat (*Neotoma cinerea*)	Ord's kangaroo rat (*Dipodomys ordii*)
Cliff chipmunk (*Neotamias dorsalis*)	Pallid bat (*Antrozous pallidus*)
Coyote (*Canis latrans*)	Piñon mouse (*Peromyscus truei*)
Crawford's gray shrew (*Notiosorex crawfordi*)	Raccoon (*Procyon lotor*)
Desert cottontail (*Sylvilagus audubonii*)	Ringtail (*Bassariscus astutus*)
Elk (*Cervus elaphus*)	Rock squirrel (*Otospermophilus variegatus*)
Fringed myotis (*Myotis thysanodes*)	Silky pocket mouse (*Perognathus flavus*)
Golden-mantled ground squirrel (*Callospermophilus lateralis*)	Silver-haired bat (*Lasionycteris noctivagans*)
Gray fox (*Urocyon cinereoargenteus*)	Spotted bat (*Euderma maculatum*)
Spotted ground squirrel (*Xerospermophilus spilosoma*)	Western spotted skunk (*Spilogale gracilis*)
Stephens's woodrat (*Neotoma stephensi*)	White-footed deermouse (*Peromyscus leucopus*)
Striped skunk (*Mephitis mephitis*)	White-tailed antelope squirrel (*Ammospermophilus leucurus*)
Townsend's big-eared bat (*Corynorhinus townsendii*)	White-tailed deer (*Odocoileus virginianus*)
Western harvest mouse (*Reithrodontomys megalotis*)	White-throated woodrat (*Neotoma albigula*)
Western red bat (*Lasiurus blossevilii*)	Yuma myotis (*Myotis yumanensis*)
Western small-footed myotis (*Myotis ciliolabrum*)	

* = Species observed by SWCA during site visits

References

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EXHIBIT E

Scenic Areas, Historic Sites and Structures, and Archaeological Sites

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EXHIBIT E. SCENIC AREAS, HISTORIC SITES AND STRUCTURES, AND ARCHAEOLOGICAL SITES

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

> *Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon.*

Introduction

The proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) will be located entirely on private land, all of which is within the jurisdiction of Navajo County. Arizona State Trust land and federal land managed by the Bureau of Land Management (BLM) exist in the vicinity (see maps in Exhibit A). A detailed description of the proposed generation-tie transmission line (Gen-Tie Line) infrastructure, including conceptual Gen-Tie Line options, is provided in the Certificate of Environmental Compatibility (CEC) Application and shown on maps in Exhibit A.

Scenic Areas

This section of Exhibit E describes 1) any designated scenic areas within the vicinity of the Gen-Tie Project, and 2) the overall scenic features (i.e., characteristic landscape) within the Gen-Tie Project vicinity. The effects of the Gen-Tie Project on the area's scenic resources are also evaluated.

Methods

The scenic resources analysis reported here was undertaken by SWCA Environmental Consultants. The analysis consisted of the following actions.

- A desktop review was conducted to identify any sites in the vicinity (within 5 miles) of the Gen-Tie Project that meet the following definition of "scenic area" provided in the Arizona Administrative Code at R17-3-701(A)(1)(i):

  > *. . . any area of particular scenic beauty or historical significance as determined by the federal, state, or local officials having jurisdiction thereof, and includes interests in land which have been acquired for the restoration, preservation, and enhancement of scenic beauty.*

  Scenic areas so defined would include such sites as national or state parks and monuments, designated scenic overlooks, and wild and scenic river segments.

- A field visit to the Gen-Tie Project area was conducted to gain an understanding of the characteristic landscape that would potentially be affected by construction of the Gen-Tie Project.

- An evaluation of potential visual impacts based on photo-realistic simulations from key observation points (KOPs) and a visual contrast analysis.

- Impacts to visual resources were assessed by 1) evaluating visual contrasts at KOPs that would result from the construction and operation of the Gen-Tie Project, and 2) assessing the impact visual contrasts may have on sensitive viewers.

A visual contrast analysis presents a qualitative discussion of anticipated changes in contrast between the existing landscape and the proposed activities and facilities. Factors taken into consideration for such an analysis include the distance of the proposed project elements from the viewer and the level of perceived contrast between the proposed project elements and the existing landscape. These factors are further defined below.

The distance zones for evaluating impacts to scenery are:

- Foreground: up to 1 mile
- Middle ground: 2 to 3 miles
- Background: 3 to 5 miles

The level of perceived contrast between the proposed project elements and the existing landscape is classified using the following definitions:

- None: The contrast is not visible or perceived.
- Weak: The element contrast can be seen but does not attract attention.
- Moderate: The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- Strong: The element contrast demands attention, would not be overlooked, and is dominant in the landscape.

The term "sensitive viewers" as used in this analysis refers to specific user groups associated with various land uses who have a sensitivity to landscape change and therefore could be adversely affected by the Gen-Tie Project.

Results

Designated Scenic Areas

There are no designated scenic areas as defined by the Arizona Administrative Code at R17-3-701(A)(1)(i) within 5 miles of the Gen-Tie Project.

Characteristic Landscape

The landscape in the vicinity of the Gen-Tie Project is characterized by flat open areas with minor undulations in topography. Vegetation consists mainly of large areas of light-colored (sage and light green) perennial grasses, forbs, and shrubs interspersed with dense, extensive sagebrush flats. Pinyon-juniper forests occur within the Project area and dot the landscape with irregularity. The Gen-Tie Project area lies southwest of Joseph City, Arizona, occurring on a sprawling mesa top. There are minor drainages and minor canyon country within the area.

The most notable scenic features in the landscape are the Hopi Buttes located north of Joseph City. These dark, jagged, volcanic buttes rise to a maximum of 6,480 feet above sea level and are prominent features in the broad, slightly undulating landscape. These features host low, indistinct grasses and have a sporadic distribution of pinyon-juniper woodlands. Light, vibrant, exposed soils contrast with dark grey basalt. Petrified Forest National Park is approximately 22 miles northeast of the Gen-Tie Project area and is bisected by Interstate 40.

The landscape within the Gen-Tie Project area is mostly undeveloped but has been partially modified by human-made structures and activities (see Figures A-3.1 through A-3.6 and Figure A-4 in Exhibit A). Roads, ranch infrastructure, and transmission lines have contributed to changes to the natural landscape within the Gen-Tie Project area, as have scattered rural residences located on subdivided land west of the Infrastructure Siting Area and east and west of the Gen-Tie Line Corridor to Cholla Substation.

A cluster of ranch buildings, including three residential-type structures, are located approximately 0.4 to 0.5 mile southeast of the Gen-Tie Line Corridor to Cholla Substation and are separated from the corridor by three existing Arizona Public Services Company (APS) transmission lines. Three residential-type structures are located on the outskirts of Joseph City approximately 0.5 to 1 mile northwest the Cholla Substation. West of the Wind Farm Site is the sparsely developed Chevelon Canyon Ranch Subdivision. In discussions with Navajo County planning staff, development in the Chevelon Canyon Ranch Subdivision consists of both permitted legal residences and unpermitted structures, including mobile homes and recreation vehicles.

Numerous improved and unimproved dirt local roads occur within the vicinity, as well as Arizona State Highway 377, Arizona State Highway 99, and Interstate 40, a primary transportation thoroughfare for southwest states. Additional human modification to the landscape includes range improvements such as the occasional earthen and metal stock tanks, corrals, and ranch outbuildings. With the exception of existing high-voltage transmission line infrastructure, Cholla Substation, and Cholla Power Plant, the overall character of the landscape can be considered rural rangeland.

KOP Selection

Two KOPs were selected to simulate the Gen-Tie Project: Obed Road KOP and Siby Road KOP (Figure E-1). The visual simulations to support each KOP are included in Attachment E-1. The Obed Road KOP was selected in coordination with Applicant (West Camp Wind Farm, LLC) and Navajo County, Arizona, planning staff in support of the West Camp Wind Farm Navajo County Special Use Permit application. The Obed Road KOP represents views of the Gen-Tie Line Corridor to Cholla Substation and is located approximately 2.5 miles south of the Cholla Substation. A transmission line would be constructed within the Gen-Tie Line Corridor to Cholla Substation under conceptual Gen-Tie Line Option A (see Figure A-2 in Exhibit A).

Following further refinement of the Gen-Tie Project, a second KOP was selected for inclusion in the CEC application to represent views of the Gen-Tie Project from the Chevelon Canyon Ranch Subdivision. The Siby Road KOP is located approximately 0.45 mile west of the Infrastructure Siting Area and represents views from the nearest legal residence (legal residence determined in coordination with Navajo County, Arizona planning staff). The simulation condition from this KOP is the conceptual transmission line that would be constructed under the Gen-Tie Line Option B dual substation configuration (see Figure A-2 in Exhibit A).

Visual Contrast Analysis and Potential Effects

Impacts to scenic resources were determined by examining the simulated condition and evaluating the degree of change in landscape character (i.e., degree to which Project elements contrast with existing conditions) that would result from the construction and operation of the Gen-Tie Project.

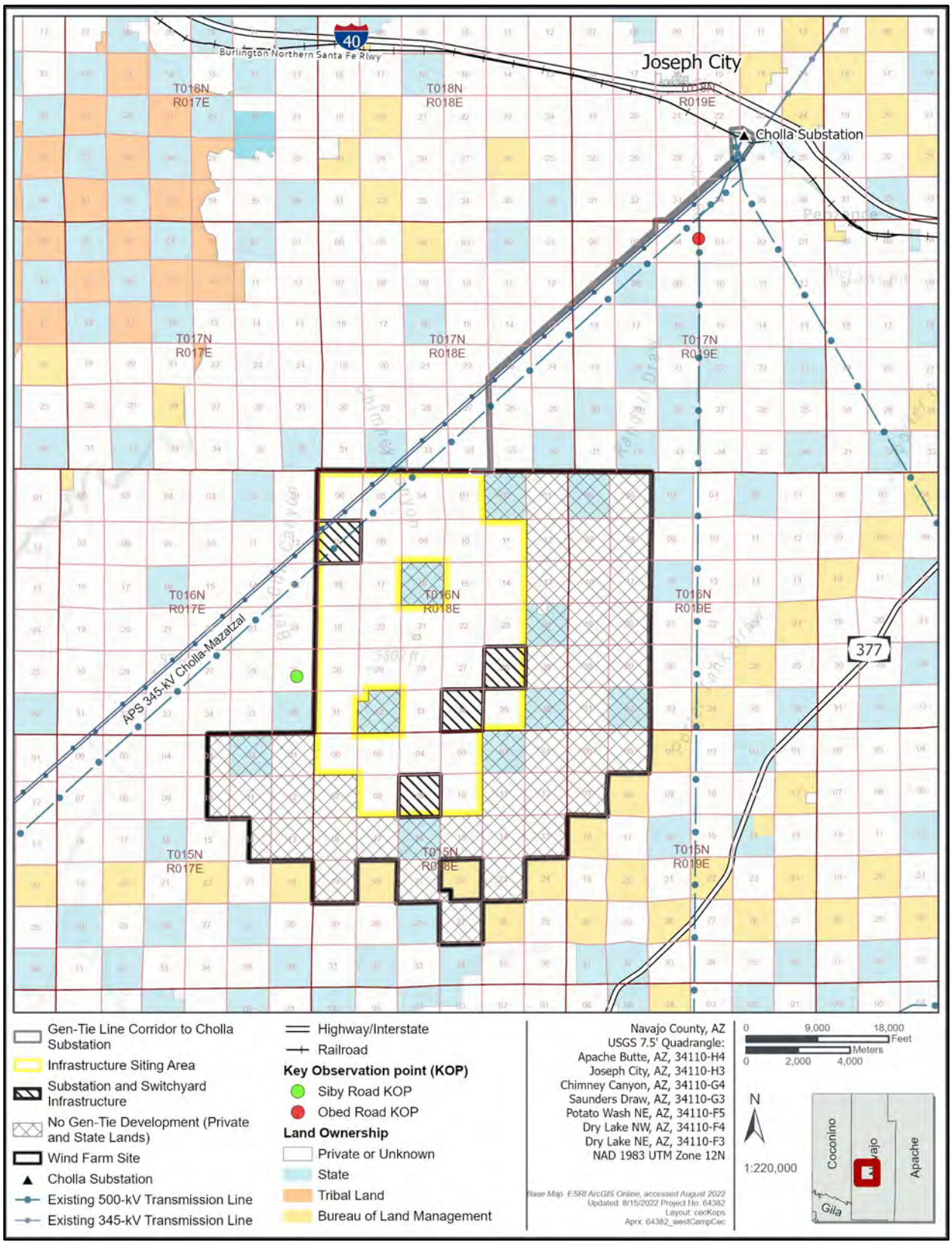

Figure E-1. Gen-Tie Project KOPs.

Effects on the Characteristic Landscape

Construction activities associated with the installation of the Gen-Tie Project would introduce temporary visual contrasts to the form, line, color, and texture of the existing characteristic landscape. During construction, contrasts would result from ground disturbance, removal of vegetation, temporary storage of equipment and materials, and fugitive dust. In addition, construction equipment would be temporarily visible during construction activities. Areas of temporary disturbance would be reclaimed after construction activities are completed. In general, where the Gen-Tie Project is visible, contrasts related to construction would range from weak to strong depending upon the distance, intervening topography, and viewing angle.

Except where the existing transmission lines, Cholla Substation, and Cholla Power Plant are readily visible, the Project would create contrast with the existing landscape through the introduction of the regular geometric forms (i.e., horizontal and vertical lines) associated with the Gen-Tie Line, substations, switchyard, and line tap. These human-made structures would provide contrast by introducing new form, line, and color into the irregular, organic forms and colors of the existing natural landform and vegetation. Long-term views in the foreground would present strong contrast with the existing landscape; views from the middle ground and background would range from moderate to weak, depending on the distance and viewing angle. In foreground areas (within 1 mile), visual impacts would be greatest. Middle ground and background views of the Project would diminish with increasing distance, and the contrast would range from moderate to weak. Overall, the level of change to the characteristic landscape would be moderate.

Where the existing transmission lines, Cholla Substation, and Cholla Power Plant are visible, the proposed Gen-Tie Line would repeat the basic visual elements of the existing transmission lines within the viewshed, which are similar in form, line, and color. In areas where the existing transmission lines are in the foreground or middle ground of the viewer, the contrast presented by the Gen-Tie Project would be weak.

Obed Road KOP

This KOP represents the view of a vehicle traveling north along Obed Road, approximately 0.9 mile south of the proposed Gen-Tie Line Corridor to Cholla Substation (see Figure E-1). Views in the immediate foreground consist of a smooth, consistent, distinctive roadway with contrasting paint markings along with indistinct, low grasses and exposed soils. Vegetation colors range from light tans to sage greens, while exposed soils consist of red-browns. Terrain remains level and flat. Throughout the foreground and middle ground, there are dark repeating barbed-wire fences, overhead electric lines, tall weathered grey lattice transmission structures, and a communication tower that add vertical elements to the landscape. Landform views in the middle ground consist of distinct, undulating, and continuous brown to light grey vegetation with small uplifts in the distance. Views in the background consists of soft uplifted buttes with darker exposed soils.

From this KOP, the viewer would be approximately 0.9 mile south from the intersection of Obed Road and the Gen-Tie Line. Based on the viewer's neutral perspective and similar transmission infrastructure within the area, the Gen-Tie Line would be perceived but would not dominate the view. Gen-Tie Line would create weak contrast and absorb into the existing landscape.

Siby Road KOP

This KOP represents the view of a vehicle traveling east along Siby Road, approximately 0.45 mile west of the Infrastructure Siting Area (see Figure E-1). Views in the immediate foreground consist of a smooth to medium-textured, dirt roadway with light red-brown coloration along with smaller low-stature desert scrub bushes accompanied by globular medium-stature bushes.

Vegetation colors range from dark forest greens, dark grays, yellow-greens, and pale yellows, while exposed soils consist of red-browns. The terrain is softly undulating but primarily remains level. Throughout the foreground and middle ground, there are minimal human-made features that include the dirt roadway and a weathered wooden fence. The landscape characteristic retains an undeveloped, rural feel. Landform views in the middle ground consist of homologous and continuous dark green shrubs with small uplifts in the distance. Views of the background remain unseen due to variations in topography.

From this KOP, the viewer would be approximately 0.8 mile west from the Gen-Tie Line. Based on the viewer's neutral perspective, the Gen-Tie Line would begin to dominate the view. The Gen-Tie Line would create a moderate to strong contrast and introduce new line, form, color, and texture elements not found within the existing landscape. The Gen-Tie Line would appear discordant against the existing landscape.

Effects on Sensitive Viewers

The potential sensitive viewers are rural residents, dispersed recreationists, and public users of the Gen-Tie Project area ranchlands, and travelers on Arizona State Highway 377, Arizona State Highway 99, and Interstate 40.

Residents: As noted above, aside from unincorporated Joseph City located approximately 2 miles northwest of the Cholla Substation, very few people live within 3 miles of the Gen-Tie Project. The sparsely occupied Chevelon Canyon Ranch Subdivision occurs west of the Gen-Tie Project. Several residential-type structures are scattered throughout the subdivision and within 1 mile of the Gen-Tie Project (see Figure A-4 in Exhibit A). The closest legal residence is approximately 0.45 mile (in the foreground) from the Infrastructure Siting Area. Current views from residential areas are generally of open rangeland in a slightly undulating landscape with native vegetation and background views of buttes. Residences in proximity to the Wind Farm Site likely have foreground, middle ground, or background views of the three existing high-voltage transmission lines located to the west and northwest. Residences located further north near the Gen-Tie Line Corridor to Cholla Substation likely also have middle ground or background views of the Cholla Substation, Cholla Power Plant, and Interstate 40.

Scenery impacts to residences could particularly occur from the construction and long-term operation of the on-site switchyard and line tap and associated Gen-Tie Line if constructed near the boundary of the Infrastructure Siting Area. The degree of visibility of this project component depends on the distance to the Gen-Tie Project facilities from residences and variation in landform and vegetation in the landscape. As described above under the Siby Road KOP located near the closest legal residence, the proposed Gen-Tie Line, under Gen-Tie Line Option B, would dominate the view against the rural landscape that exists. Elsewhere, including as described above under the Obed Road KOP, where the Gen-Tie Project facilities are visible, they would contrast with the surrounding landscape, but the change would be weak because of the distance from the residential area and the visual dominance of the existing transmission lines close to the residences.

Recreationists: Recreationists in the area include hunters and public users of the private ranchlands in the Gen-Tie Project area or adjacent public land (refer to Exhibit F for a description of recreation uses). Current views for these individuals consist of open rangeland with native vegetation and ranch-related facilities and background views of buttes and distant mountains. Several existing transmission lines and the Cholla Substation and Cholla Power Plant may be visible depending on the viewer's location.

After the Project is built, recreationists in the area would see a change in the existing landscape with regard to the degree of contrast depending upon the vantage point distance, the angle of view, and the proximity of the existing transmission lines, Cholla Substation, and Cholla Power Plant. The geometric forms of the Gen-Tie Project facilities would be highly visible for recreationists when near the facilities in

the Infrastructure Siting Area or along the Gen-Tie Line Corridor to Cholla Substation. Given the proximity to the three existing transmission lines, Cholla Substation, and Cholla Power Plant, the contrast would be moderate.

Travelers: As described above, the primary travel routes in the vicinity of the Gen-Tie Project are Arizona State Highway 377, Arizona State Highway 99, and Interstate 40. Additional local roads within the Gen-Tie Project Area and vicinity include rural residential access roads (e.g., Hutch Road, Obed Road, Mclaws Road) and numerous ranch roads. Views of the Gen-Tie Project facilities from the primary travel routes would be weak and limited due to distance, intervening landscape features, and existing transmission infrastructure.

Views from the Obed Road KOP are described above. Persons traveling on Hutch Road would have middle ground to background views to the north of Gen-Tie Project facilities in the Infrastructure Siting Area, along with background views of the existing transmission lines. At the closest point, Hutch Road is approximately 2 miles south of the closest section where substation infrastructure would be constructed. Views of the Gen-Tie Project facilities from Hutch Road would be weak to moderate at this distance. The introduction of new forms in the landscape would have the greatest impact on travelers on ranch roads in the closest proximity to the Gen-Tie Project facilities, with foreground views being moderate to strong.

Cultural Resources (Historic Sites and Structures and Archaeological Sites)

As stipulated by the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, the potential effects of the Gen-Tie Project on historic sites and structures and archaeological sites were assessed. The assessment also was prepared to support Arizona Corporation Commission compliance with the State Historic Preservation Act (Arizona Revised Statutes 41-861 through 41-864), which requires state agencies to consider impacts of their programs on historic properties listed in or eligible for listing in the Arizona Register of Historic Places (ARHP), and to provide the State Historic Preservation Officer (SHPO) an opportunity to review and comment on the actions that affect such historic properties.

To be eligible for the ARHP a property must be at least 50 years old (less, if it has special significance) and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. It should also possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the four following criteria:

- Criterion (a): be associated with significant historical events or trends
- Criterion (b): be associated with historically significant persons
- Criterion (c): have distinctive characteristics of a style or type, or have artistic value, or represent a significant entity whose components may lack individual distinction
- Criterion (d): have yielded or have potential to yield important information concerning history or prehistory

Records Review

To assess the potential effects of the Gen-Tie Project on historic sites and structures and archaeological sites, the following record sources were reviewed within 1 mile of the Gen-Tie Project:

- Aerial photographs

- Archaeological Records Office at the University of Arizona
- AZSITE database at Arizona State University
- Geological maps
- Historic General Land Office (GLO) Plats
- Historic U.S. Geological Survey (USGS) topographic quadrangle maps
- National Archaeological Database (NADB) Reports
- National Register of Historic Places (NRHP)
- tDAR - the Digital Archaeological Record database at Arizona State Museum

The records review identified of 89 historic sites, historic structures, and archaeological sites. These are listed in Table E-1 and discussed below.

Table E-1. Historic Sites, Structures, and Archaeological Sites within 1 Mile of the Gen-Tie Project

Name/ID	Type	Age	Description	ARHP Status	Project Area	1-Mile Buffer
APS NE-1	Historic Structure	Historic	Transmission line	Considered Eligible	X	
AZ I:15:156(ASM)	Historic Structure	Historic	Historic Route 66	Determined Eligible		X
AZ P:3:1(ASM)	Historic Site	Historic	Cattle range	Unevaluated	X	
AZ P:3:4(ASM)	Archaeological Site	Unknown	Artifacts	Determined Ineligible		X
AZ P:3:5(ASM)	Archaeological Site	Unknown	Artifacts	Determined Ineligible		X
AZ P:3:6(ASM)	Historic Structure	Historic	Room foundation and trash	Unevaluated		X
AZ P:3:7(ASM)	Archaeological Site	Prehistoric	Artifacts	Eligible Contributor		X
AZ P:3:8(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:9(ASM)	Archaeological Site	Multicomponent	Artifacts, tent pad, fire ring	Unevaluated		X
AZ P:3:10(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:12(ASM)	Archaeological Site	Prehistoric	Features	Determined Ineligible	X	
AZ P:3:13(ASM)	Archaeological Site	Prehistoric	Habitation	Considered Eligible		X
AZ P:3:14(ASM)	Archaeological Site	Prehistoric	Artifacts	Considered Eligible		X
AZ P:3:15(ASM)	Archaeological Site	Prehistoric	Habitation	Considered Eligible		X
AZ P:3:16(ASM)	Archaeological Site	Prehistoric	Habitation	Considered Eligible		X
AZ P:3:33(ASM)	Historic Structure	Historic	Building foundation	Considered Eligible		X
AZ P:3:34(ASM)	Archaeological Site	Prehistoric	Rock Art	Determined Eligible		X
AZ P:3:48(MNA)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:112(ASM)	Archaeological Site	Prehistoric	Habitation	Unevaluated	X	
AZ P:3:156(ASM)	Archaeological Site	Prehistoric	Features	Unevaluated		X
AZ P:3:163(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:164(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:165(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:166(ASM)	Archaeological Site	Prehistoric	Features	Unevaluated	X	

Name/ID	Type	Age	Description	ARHP Status	Project Area	1-Mile Buffer
AZ P:3:167(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:168(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:169(ASM)	Archaeological Site	Prehistoric	Features	Unevaluated		X
AZ P:3:170(ASM)	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
AZ P:3:185(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:186(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:187(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:188(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:189(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:190(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:191(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:192(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:193(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:194(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:196(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
AZ P:3:197(ASM)	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
AZ P:3:198(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
AZ P:3:199(ASM)	Archaeological Site	Prehistoric	Habitation	Unevaluated	X	
AZ P:3:200(ASM)	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
AZ P:3:201(ASM)	Archaeological Site	Prehistoric	Features	Unevaluated	X	
AZ P:3:208(ASM)	Historic Site	Historic	Trash	Considered Ineligible		X
AZ P:3:209(ASM)	Historic Site	Historic	Trash	Considered Ineligible		X
AZ P:3:210(ASM)	Archaeological Site	Multicomponent	Artifacts and trash	Considered Ineligible		X
AZ P:3:211(ASM)	Archaeological Site	Prehistoric	Artifacts	Considered Eligible		X
AZ P:4:146(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:134(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:135(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:136(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:137(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:138(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:139(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:140(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:141(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:142(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:143(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:144(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:145(ASM)	Archaeological Site	N/A	N/A	Unevaluated		X
AZ P:7:147(ASM)	Archaeological Site	Prehistoric	Features	Determined Eligible		X
AZ P:7:148(ASM)	Archaeological Site	Prehistoric	Features	Determined Eligible	X	
AZ P:7:150(ASM)	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X

Name/ID	Type	Age	Description	ARHP Status	Project Area	1-Mile Buffer
AZ P:7:151(ASM)	Archaeological Site	Prehistoric	Artifacts	Determined Ineligible		X
AZ P:7:152(ASM)	Archaeological Site	Prehistoric	Features	Determined Eligible		X
AZ P:7:153(ASM)	Archaeological Site	Prehistoric	Habitation	Determined Eligible		X
AZ P:7:158(ASM)	Archaeological Site	Prehistoric	Artifacts	Determined Eligible		X
AZ P:7:169(ASM)	Archaeological Site	Prehistoric	Habitation	Determined Eligible		X
AZ P:7:191(ASM)	Archaeological Site	N/A	N/A	Unevaluated	X	
AZ P:7:192(ASM)	Archaeological Site	N/A	N/A	Unevaluated	X	
AZ P:7:193(ASM)	Archaeological Site	N/A	N/A	Unevaluated	X	
NA3211	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA3212	Archaeological Site	Prehistoric	Habitation	Unevaluated	X	
NA3213	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
NA3214	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA3215	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA3216	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA3217	Archaeological Site	Prehistoric	Artifacts	Unevaluated	X	
NA9045	Archaeological Site	Prehistoric	Habitation	Unevaluated	X	
NA14217	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
NA15097	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA15098	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA15099	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA15100	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA15102	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X
NA 15104	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA 15105	Archaeological Site	Prehistoric	Habitation	Unevaluated		X
NA 15187	Archaeological Site	Prehistoric	Artifacts	Unevaluated		X

Historic Sites

Three known historic sites are documented within 1 mile of the Gen-Tie Project. One is a historic cattle grazing area not evaluated for ARHP listing. The other two are trash scatters that are considered not eligible for ARHP listing.

Historic Structures

Four known historic structures are within 1 mile of the Gen-Tie Project. One is Historic Route 66, which has been determined eligible for ARHP listing. Another is APS NE-1 line, or the Cholla–Keams Canyon line. The 69-kV line transmits electricity between several northern Arizona communities and is considered eligible for ARHP listing. The third is a room foundation with nearby trash that is not evaluated for ARHP listing. The fourth is the foundation of a dismantled building (Mormon fort) that is considered eligible for ARHP listing.

Archaeological Sites

There are 82 known archaeological sites within 1 mile of the Gen-Tie Project: nearly all are Native American sites associated with the Ancestral Puebloan archaeological culture and considered to be ancestral sites for the Hopi Tribe. Twenty-two of the archaeological sites are noted to be prehistoric habitation sites, ranging from small field houses to small villages of 10 to 12 rooms. Nine of the archaeological sites consist of features, likely reflecting camp sites. Thirty-five of the archaeological sites consist only of artifacts, typically debris from stone tool making and ceramic fragments from broken pottery vessels. One archaeological site consists of a petroglyph panel. The archaeological sites cluster along canyon margins, in areas where dry farming was possible, and in the bases of canyons where water was accessed. At least 16 sites are registered as newly recorded ASM (Arizona State Museum) sites whose data is not readily available through AZSITE, Arizona's cultural resource inventory, or in public reports.

Nine of the cultural sites are determined eligible for listing in the ARHP, and four are determined ineligible for listing. Seven of the archaeological sites are considered eligible for ARHP listing, three are considered not eligible, and 66 have not been evaluated for ARHP listing. Many are likely to be eligible for the ARHP for their information potential under criterion (d).

Assessment of Effects

A project can have direct and/or indirect effects on historic sites and structures and archaeological sites when it alters the characteristics that qualify it for listing in the ARHP. Effects are adverse when they diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

- physical destruction of or damage to all or part of the property
- removal of the property from its historic location
- change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic characteristics
- neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe
- transfer, lease, or sale of property out of government ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

Direct effects would include the areas that would be disturbed by construction and operation of the proposed transmission line, including transmission structure locations, staging/work areas and access roads. Indirect effects would include areas that would be indirectly affected by the transmission line, primarily through visual intrusions.

Direct Effects

Twenty-three historic sites, structures, or archaeological sites are in the Gen-Tie Project area and may be subjected to direct effects. Pedestrian survey in areas of proposed ground disturbance should be conducted to identify and avoid direct effects to historic sites, structures, and archaeological sites. The typical 1,000-foot span distance between structures will facilitate avoidance by spanning.

Indirect Effects

Although the construction of the Gen-Tie Project would introduce a visual element to the area, there are already three larger transmission lines that intersect the Gen-Tie Project area: the APS 500-kV Saguaro-Cholla transmission line, the APS 345-kV Cholla-Pinnacle Peak transmission line, and the APS 345-kV Cholla-Preacher Canyon transmission line. In the northern portion, the Gen-Tie Project is in a built environment that includes a railroad, a generation station, and additional transmission lines. Due to the presence of these existing utilities and transportation-related facilities, the Gen-Tie Project is not likely to significantly diminish the visual setting. Because ARHP-eligible sites in the area are significant under criterion (d), for their information potential, these sites are not visually sensitive.

Conclusion

It is recommended that a pedestrian survey be conducted in areas of proposed ground disturbance, such as tower locations, to help avoidance of direct effects to historic sites, structures, and archaeological sites. The indirect effects of the Gen-Tie Project on historic structures, historic sites, and archaeological sites are not substantial, since visual integrity is diminished by existing high-voltage transmission lines and because known site types are not visually sensitive.

EXHIBIT E – ATTACHMENT E-1

West Camp Wind Gen-Tie Project Visual Simulations

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AES West Camp Wind Project

Sun and Weather

Sunny

Date: **4-21-22**

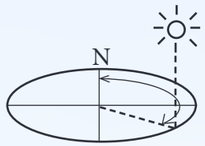
Photo Time: **10:35 am**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



110.09°

Sun Angle: **45°**

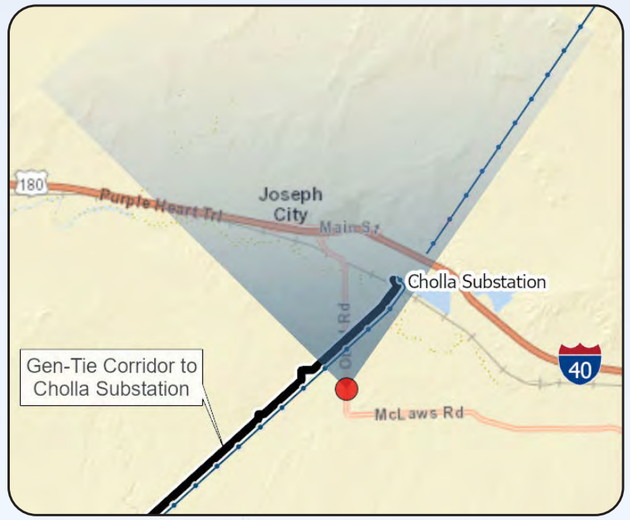
Lighting Angle on Project: **Side Lit**

Wind: **30 mph**

Temperature (°F): **60°F**

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

.

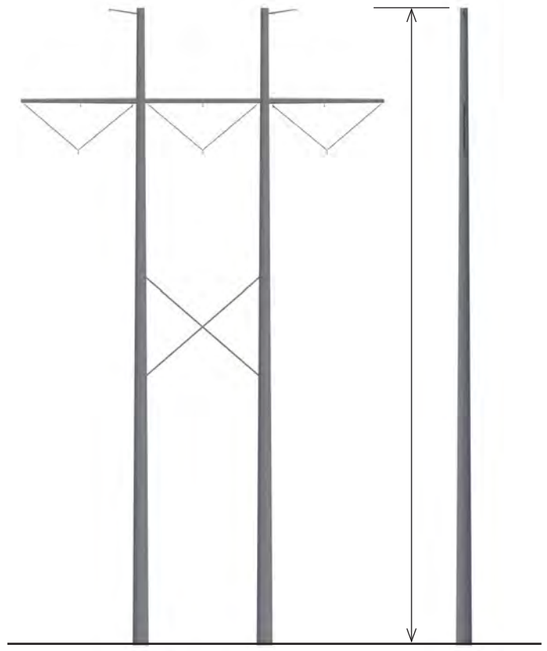


Approximate Distance to nearest Gen-Tie: **0.9 miles**

Project Location

Height to Tip of Gen-Tie Structures:

180 feet



Front Elevation — Side Elevation

500 kV Structure Diagram

Obed Road KOP

Base Photographic Documentation

Latitude (°): **34.902249**

Longitude (°): **-110.323345**

Viewpoint Elevation (feet): **5070**

Camera Height (meters): **1.5**

Camera Heading (degrees): **350**

Camera Make & Model: **Nikon D5600**

Camera Sensor Size (mm): **23.6 x 15.6**

Crop Factor: **1.53**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **32**

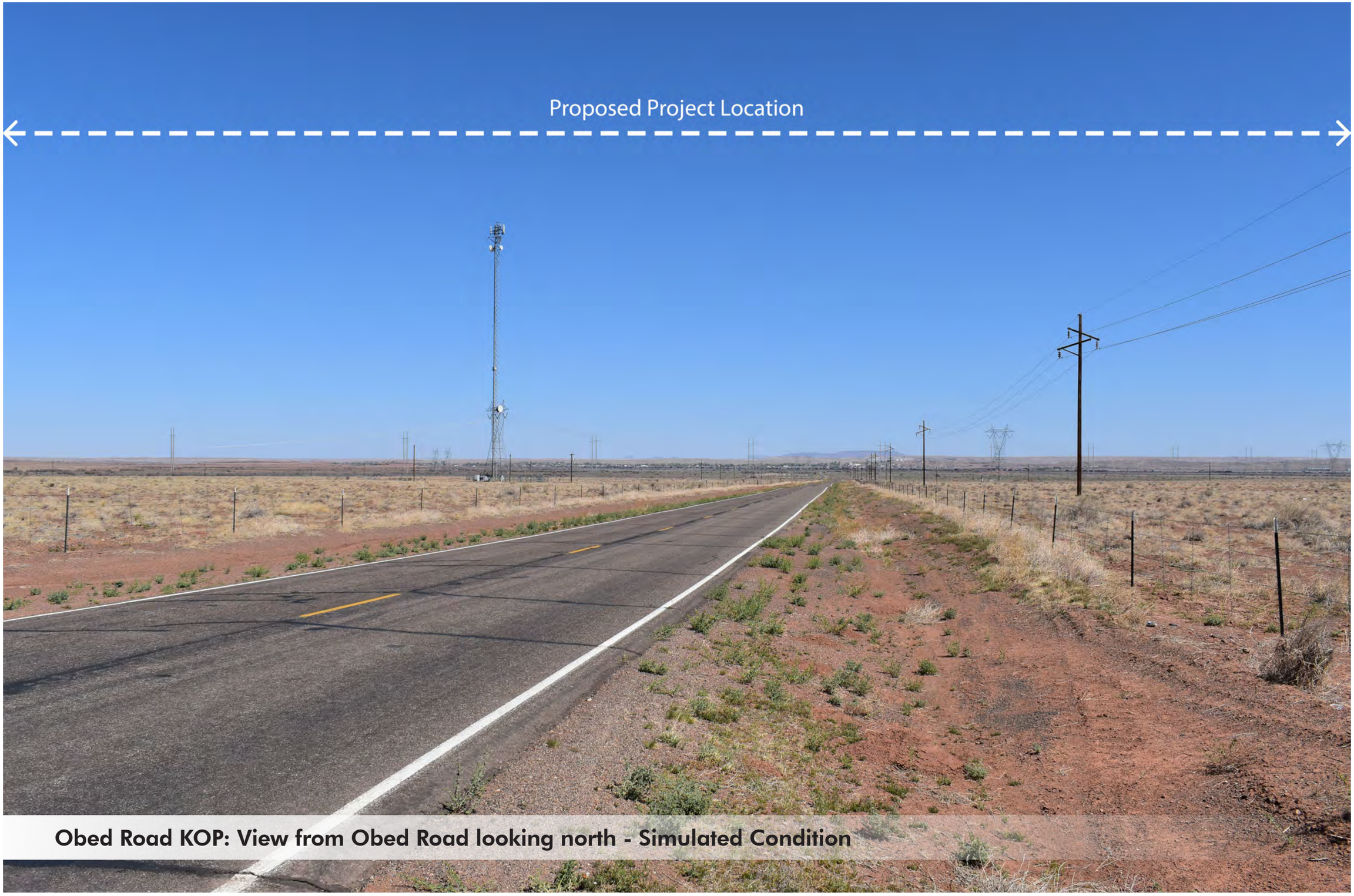
Image Size (pixels): **6000 x 4000**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

SWCA® ENVIRONMENTAL CONSULTANTS

Obed Road KOP: View from Obed Road looking north - Existing Condition



Obed Road KOP: View from Obed Road looking north - Simulated Condition

AES West Camp Wind Project

Sun and Weather

Sunny

Date: **7-21-22**

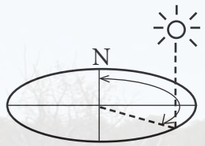
Photo Time: **10:45 am**

Visibility:

Good — Poor

Air Quality: Good

Sun Azimuth:



101°

Sun Angle: **50.9°**

Lighting Angle on Project: **back Lit**

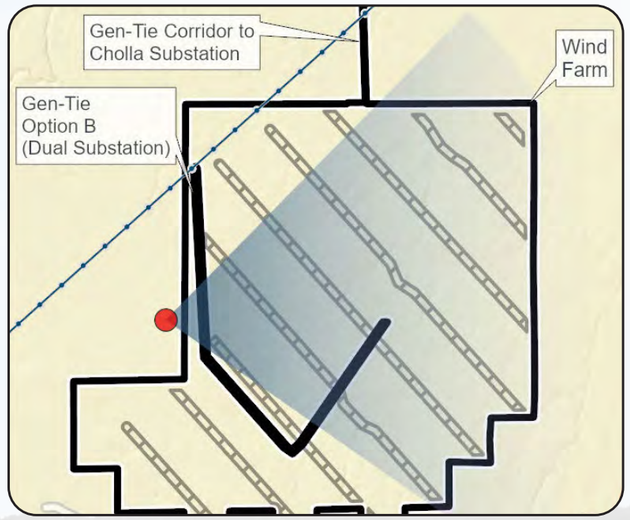
Wind: **10 mph**

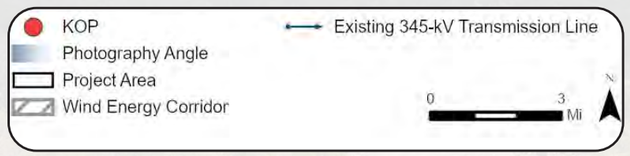
Temperature (°F): **80°F**

Turbines facing 225 degrees southwest

Simulation was prepared using information provided by client. Locations, colors, and heights may vary based on final engineering and design.

.

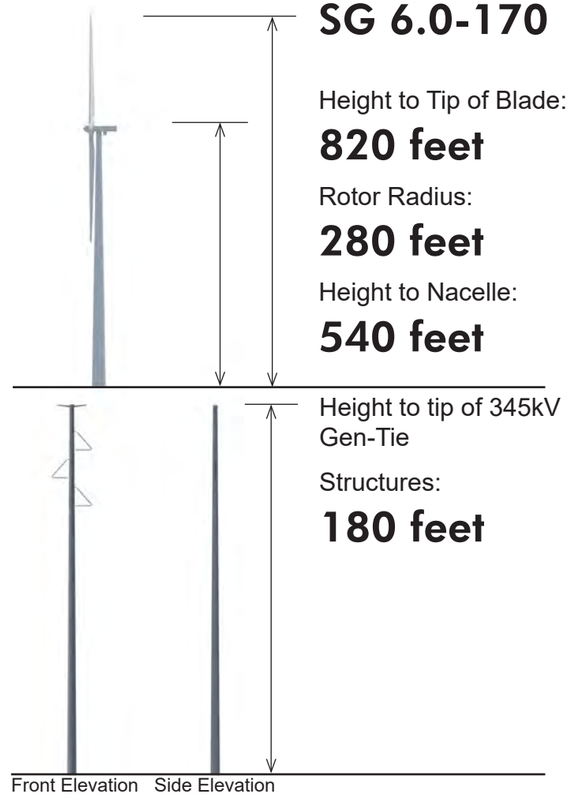




Approximate Distance to Nearest Turbine: **1.2 miles**

Approximate Distance to Nearest Gen-Tie: **0.8 miles**

Project Location



SG 6.0-170

Height to Tip of Blade: **820 feet**

Rotor Radius: **280 feet**

Height to Nacelle: **540 feet**

Height to tip of 345kV Gen-Tie Structures: **180 feet**

Structure Diagram

Siby Road KOP

Base Photographic Documentation

Latitude (°): **34.749665**

Longitude (°): **-110.492025**

Viewpoint Elevation (feet): **5740**

Camera Height (meters): **1.5**

Camera Heading (degrees): **95**

Camera Make & Model: **Nikon D5600**

Camera Sensor Size (mm): **23.6 x 15.6**

Crop Factor: **1.53**

Lens Make & Model: **AF-P Nikkor**

Lens Focal Length (mm): **32**

Image Size (pixels): **6000 x 4000**

Single frame simulation approximates 50mm full frame equivalent.

Viewing Instructions: Printed at 100% the resulting simulation is 16 inches wide by 10 inches high. At this size and focal length, the simulation should be viewed at arms length (24 inches). If viewed on a computer monitor, scale should be 100%.

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Siby Road KOP: View from Siby Road looking east - Existing Condition

Siby Road KOP: View from Siby Road looking east - Simulated Condition showing Option B

EXHIBIT F

Recreation

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EXHIBIT F. RECREATION

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-Exhibit 1, the intent of this exhibit is to:

> *State the extent, if any, the proposed site or route will be available to the public for recreational purposes, consistent with safety considerations and regulations and attach any plans the applicant may have concerning the development of the recreational aspects of the proposed site or route.*

Introduction

The proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) will be located entirely on private land, all of which is within the jurisdiction of Navajo County. Arizona State Trust land and federal land managed by the Bureau of Land Management (BLM) exist in the vicinity of the Gen-Tie Project (see maps in Exhibit A).

Access for recreational activities on private land is controlled by the private landowner. Lands crossed by the Gen-Tie Project are almost entirely owned by either the Aztec Land and Cattle Company, Ltd. (Aztec) or an affiliated company. The only exception are parcels owned by Arizona Public Service Company (APS) and the BNSF Railway Company in Section 26 of Township 18 North, Range 19 East just south of the Cholla Substation. The Cholla Substation is owned by APS and is fenced to exclude public access.

Because lands in the vicinity of the Gen-Tie Project are a checkerboard of private and State Trust land, access by recreationists (primarily hunters) to destinations on State Trust land often requires travel across private land. To facilitate and manage public access, the Arizona Game and Fish Department (AGFD) and the landowner, Aztec, have entered into a *Cooperative Stewardship Agreement for Recreational Access* for the private land within the Wind Farm Site. Under this agreement, recreational users are allowed pursuant to conditions governing access and stewardship. Additionally, access to State Trust land requires a recreation permit to camp, hike, or travel on that land. Hunting on both private land and State Trust land is regulated by the AGFD.

There are no preserves, designated trails, or other designated recreation sites within the Gen-Tie Project or vicinity. Several RV parks are located in Joseph City, northwest of the Gen-Tie Project, and in Holbrook to the east of the Gen-Tie Project. The Joseph City Park is located approximately 1 mile to the northwest of the Cholla Substation. Additional city parks are located in Holbrook to the east. Public access and dispersed recreation opportunities may also occur on BLM-managed land in the vicinity of the Gen-Tie Project; however, there are no designated BLM recreation sites or facilities (BLM 2022). Petrified Forest National Park is located approximately 22 miles northeast of the Gen-Tie Project.

Big-game (elk, deer, pronghorn) hunting is the primary recreational activity within the Gen-Tie Project area and vicinity, which falls within Arizona Game Management Unit 4B. As a general policy, Aztec grants permissive access for hunting and general public uses, except where lessees may lock gates and/or if it interferes with Aztec's operations. General public uses may include walking, horseback riding, driving along existing ranch roads, and other dispersed activities typical of Arizona rangelands. There is a geological feature locally known for hiking and exploration approximately 1 mile east of the Gen-Tie Line to Cholla Substation Corridor. This area is locally known as the Joesph City fissures or cracks and is composed of bedrock fractures of varying width, length, and depth (Hike Arizona 2022). The fractures are

primarily located in Sections 32 and 33 of Township 17 North, Range 18 East and Sections 4 and 5 of Township 16 North, Range 18 East. There are no formal trails to these features, but the area can generally be accessed via existing ranch roads and APS right-of-way access roads.

Future Availability of the Proposed Gen-Tie Route for Recreational Purposes

Rifle hunting on and in close proximity to the Gen-Tie Project during construction would pose a safety risk for construction workers. To eliminate that risk, the Applicant will work with the landowner and AGFD staff on any access closures during construction and long-term public access during operations. The Applicant and AGFD staff began preliminary discussions on access during an agency coordination meeting on May 18, 2022. The Applicant has no plans to develop the recreational aspects of the selected Gen-Tie route. The landowner may continue to allow permissive access for general public use within the Gen-Tie Project during operations. The Gen-Tie Project substation(s), switching station, and line tap will include security fencing to exclude public access during operations.

References

Bureau of Land Management (BLM). 2022. BLM National Data Web Application. Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=6f0da4c7931440a8a80bfe20eddd7550. Accessed July 7, 2022.

Hike Arizona. 2022. Joesph City Fissures, AZ. Available at: https://hikearizona.com/decoder.php?ZTN=1261/. Accessed July 11, 2022.

EXHIBIT G

Concepts of Proposed Facilities

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EXHIBIT G. CONCEPTS OF PROPOSED FACILITIES

As stipulated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-Exhibit 1, the intent of this exhibit is to:

> *Attach any artist's or architect's conception of the proposed plan or transmission line structures and switchyards, which applicant believes may be informative to the committee.*

List of Illustrations

The following illustrations (structures, circuits, and electrical layouts) for the West Camp Wind Gen-Tie Project (Gen-Tie Project) are provided in this exhibit.

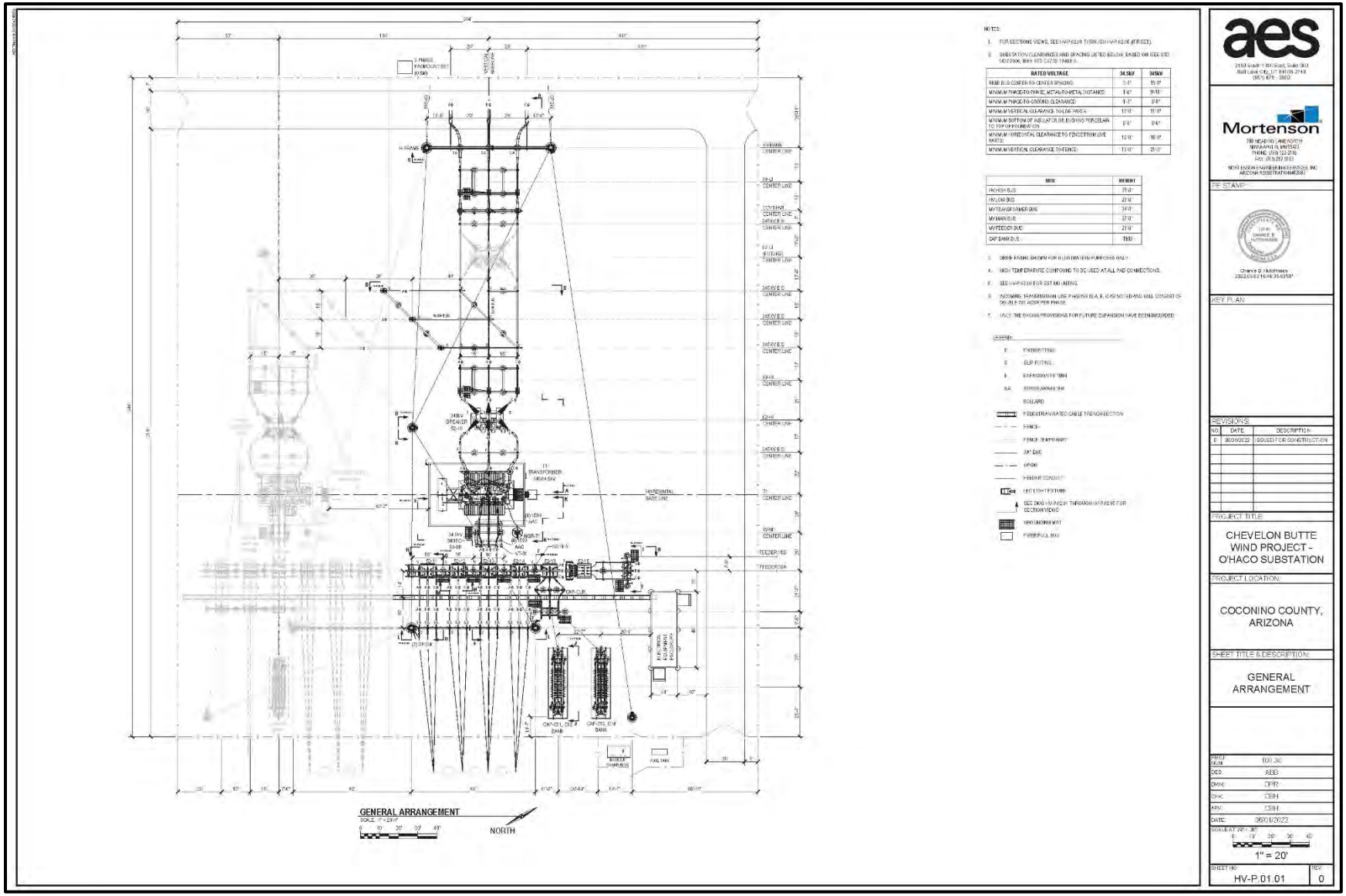


Figure G-1. Conceptual 345-kV substation general arrangement.

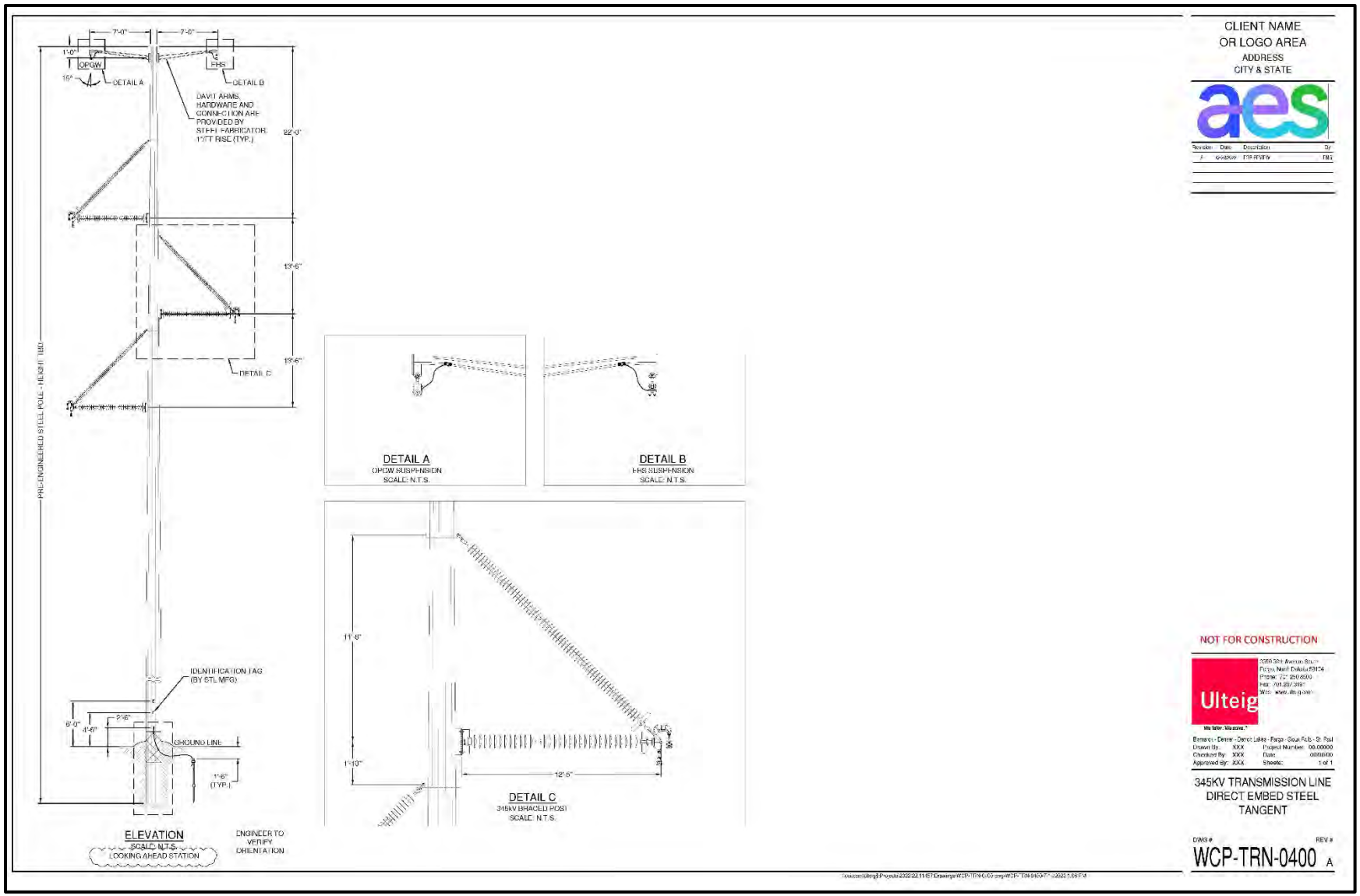


Figure G-2. Typical single-circuit 345-kV tangent pole.

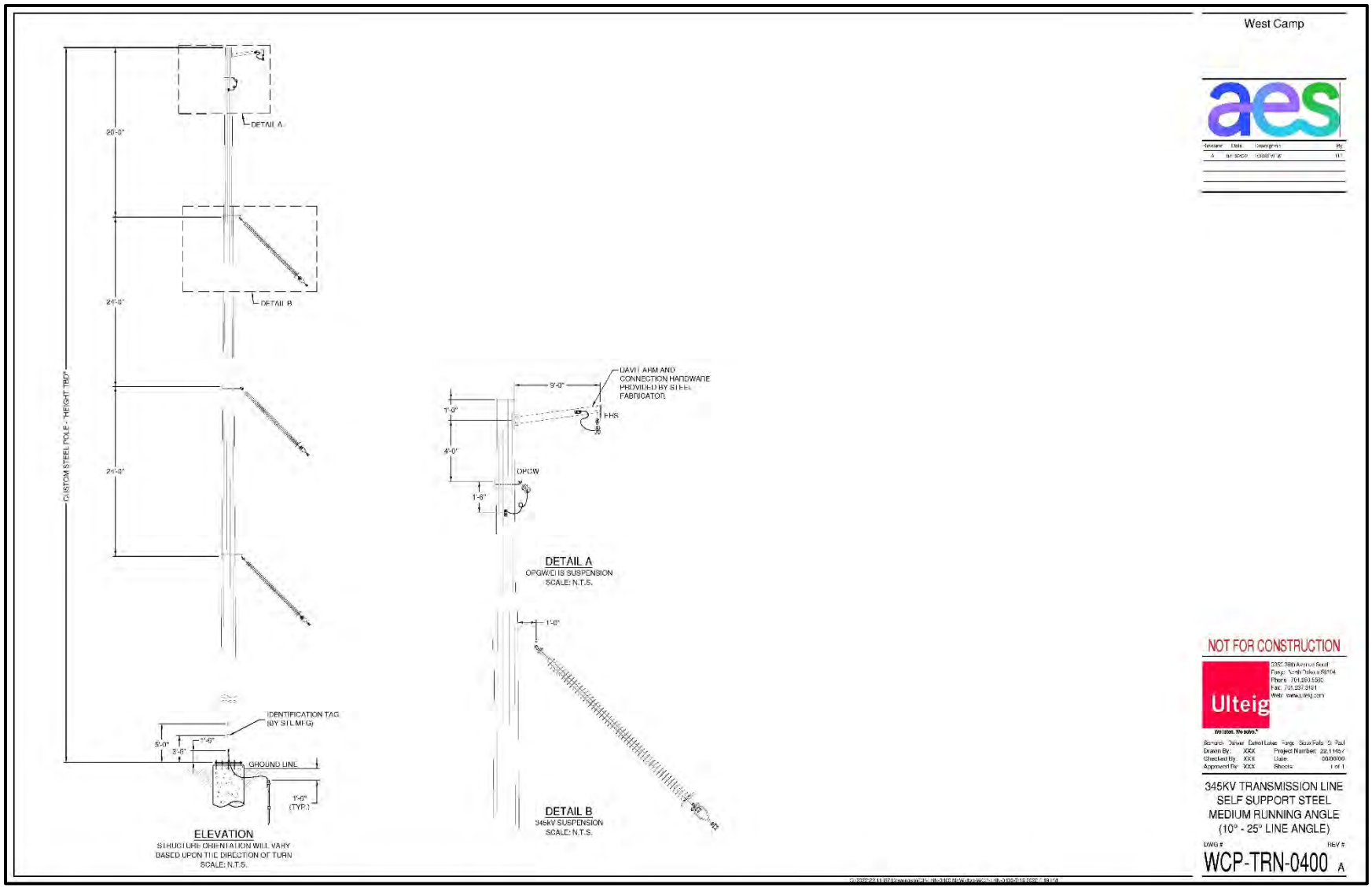


Exhibit G-3. Typical single-circuit 345-kV turning structure.

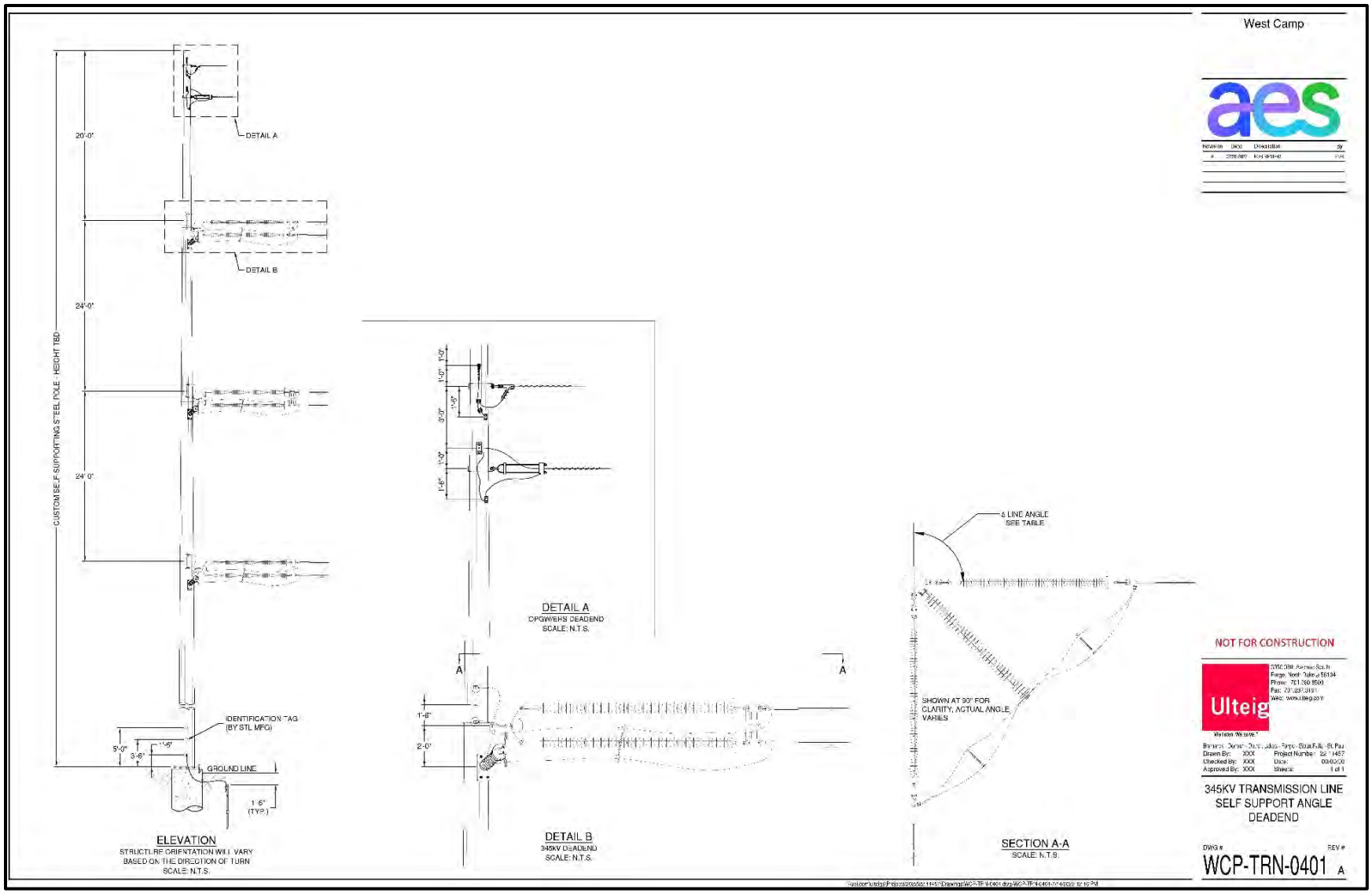


Figure G-4. Typical single-circuit 345-kV dead end structure.

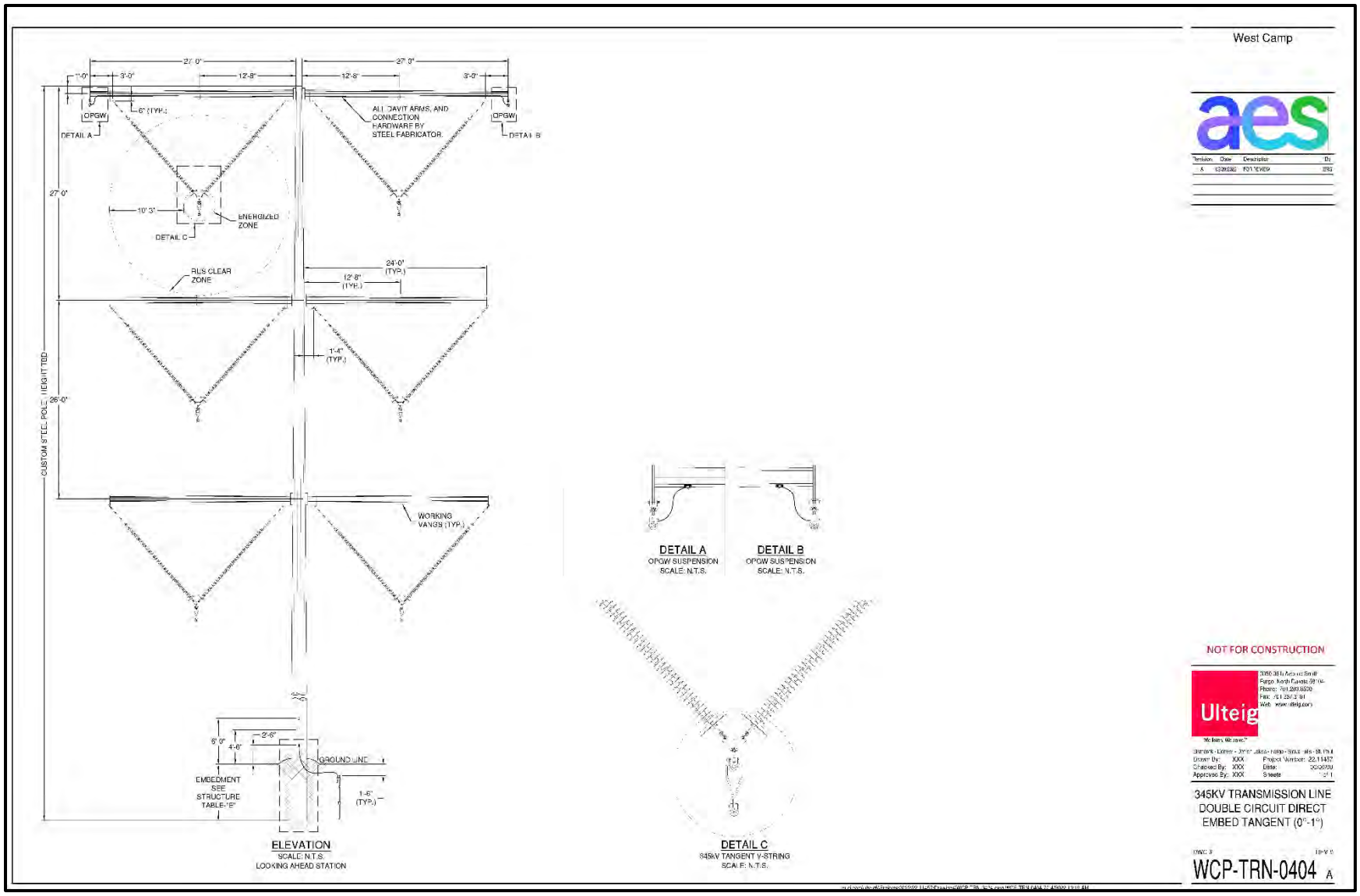


Figure G-5. Typical double-circuit 345-kV tangent structure.

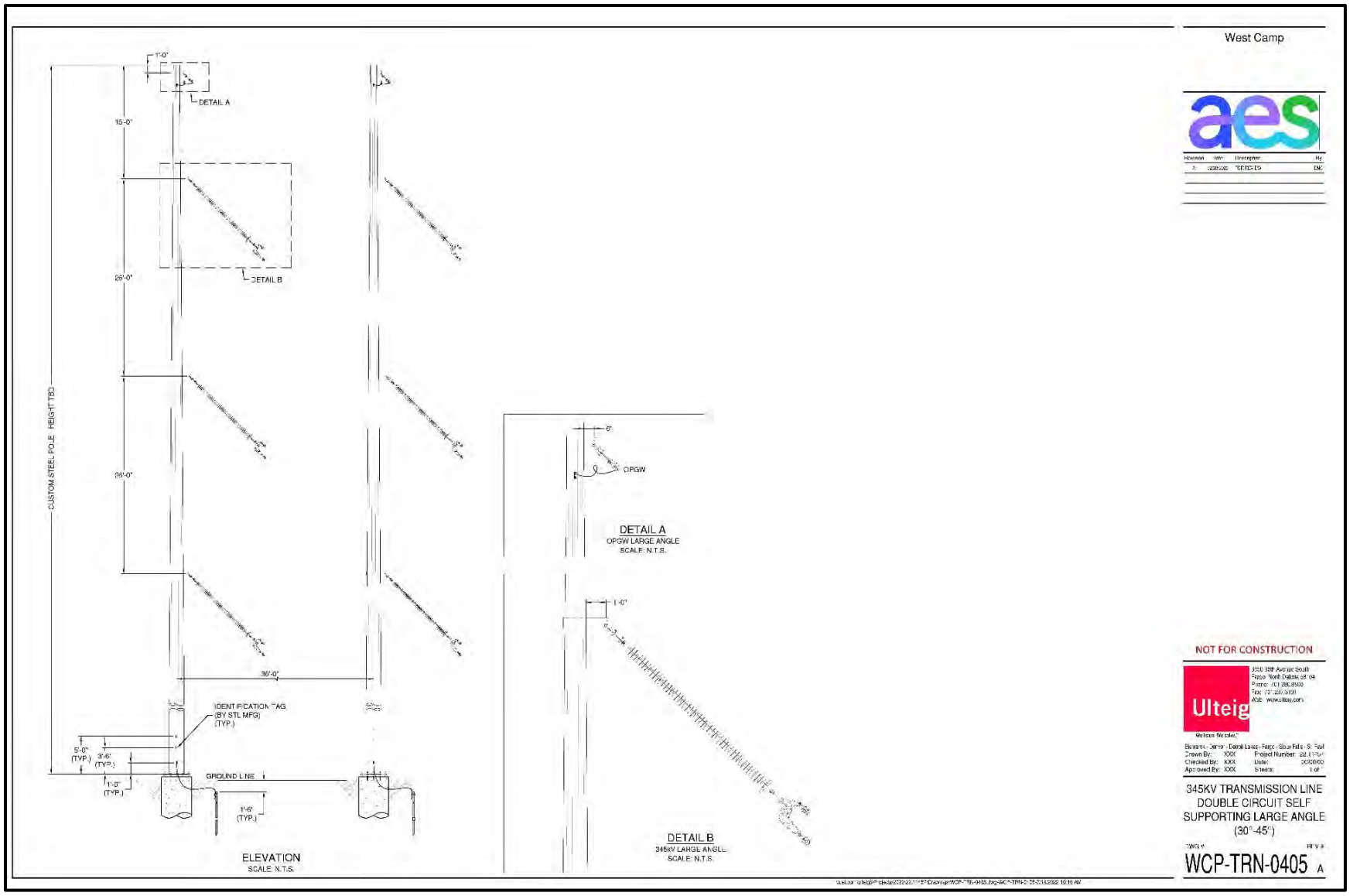


Figure G-6. Typical double-circuit 345-kV turning structure.

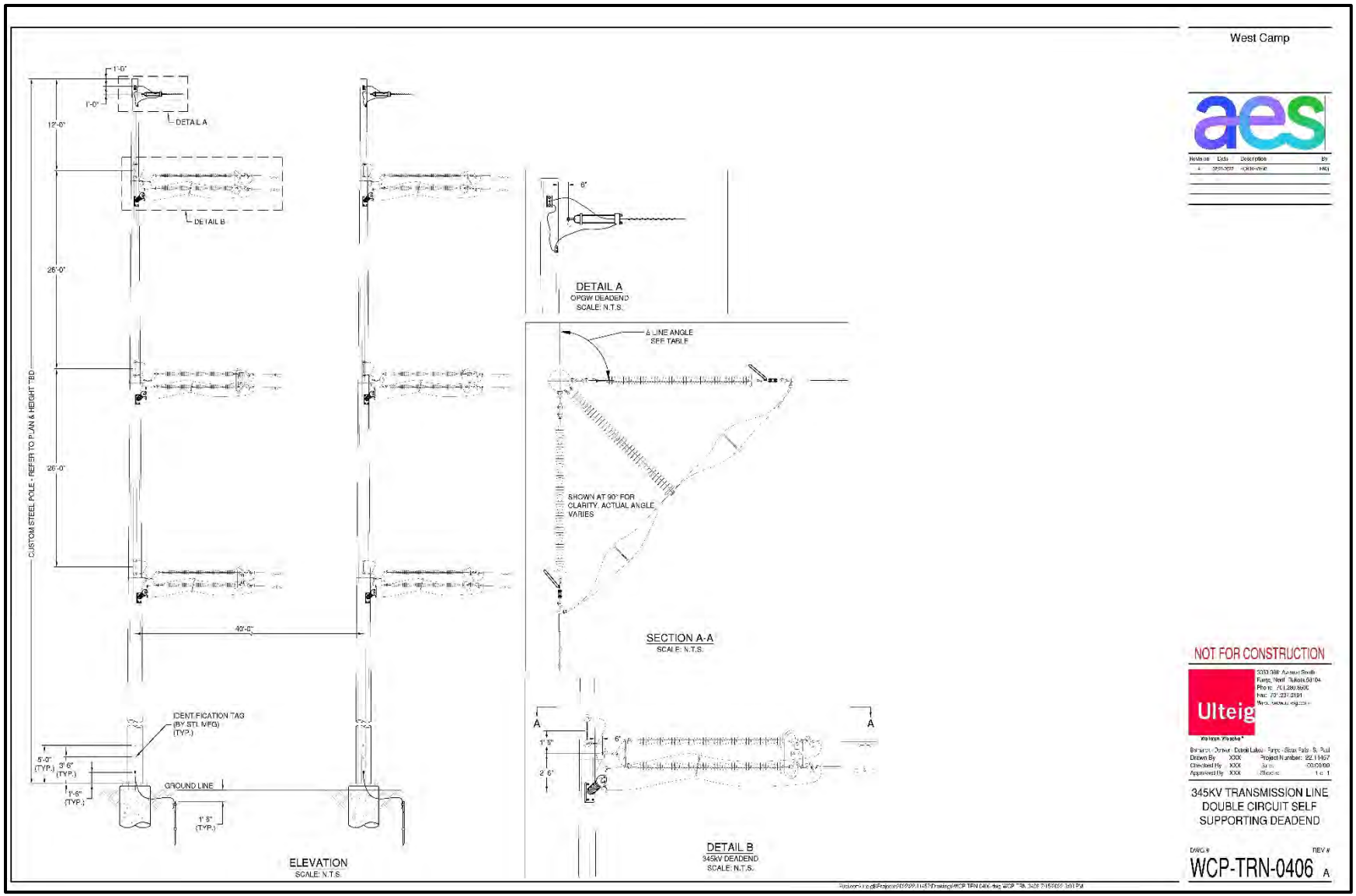


Figure G-7. Typical double-circuit 345-kV dead end structure.

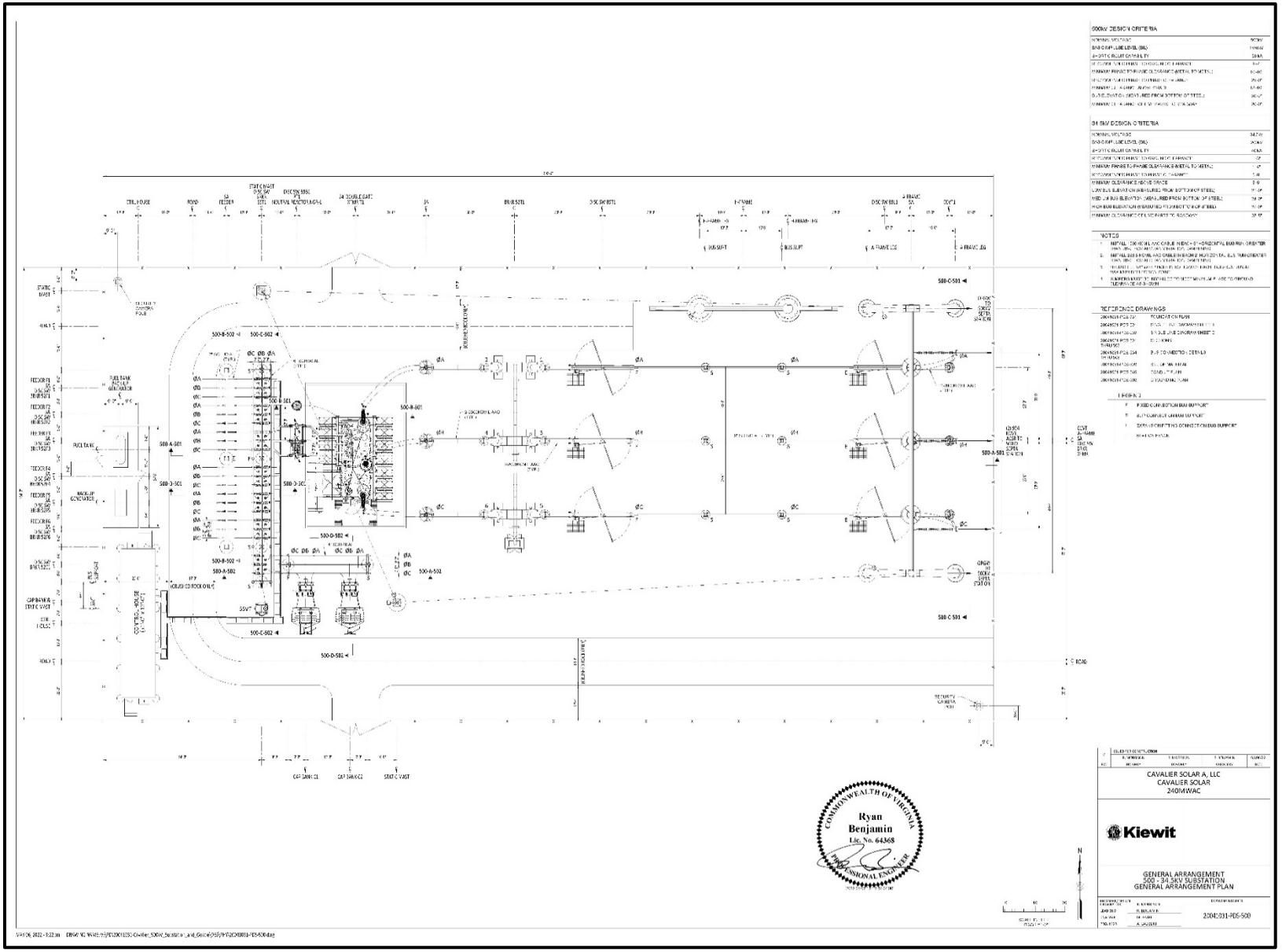


Figure G-8. Conceptual 500-kV substation general arrangement.

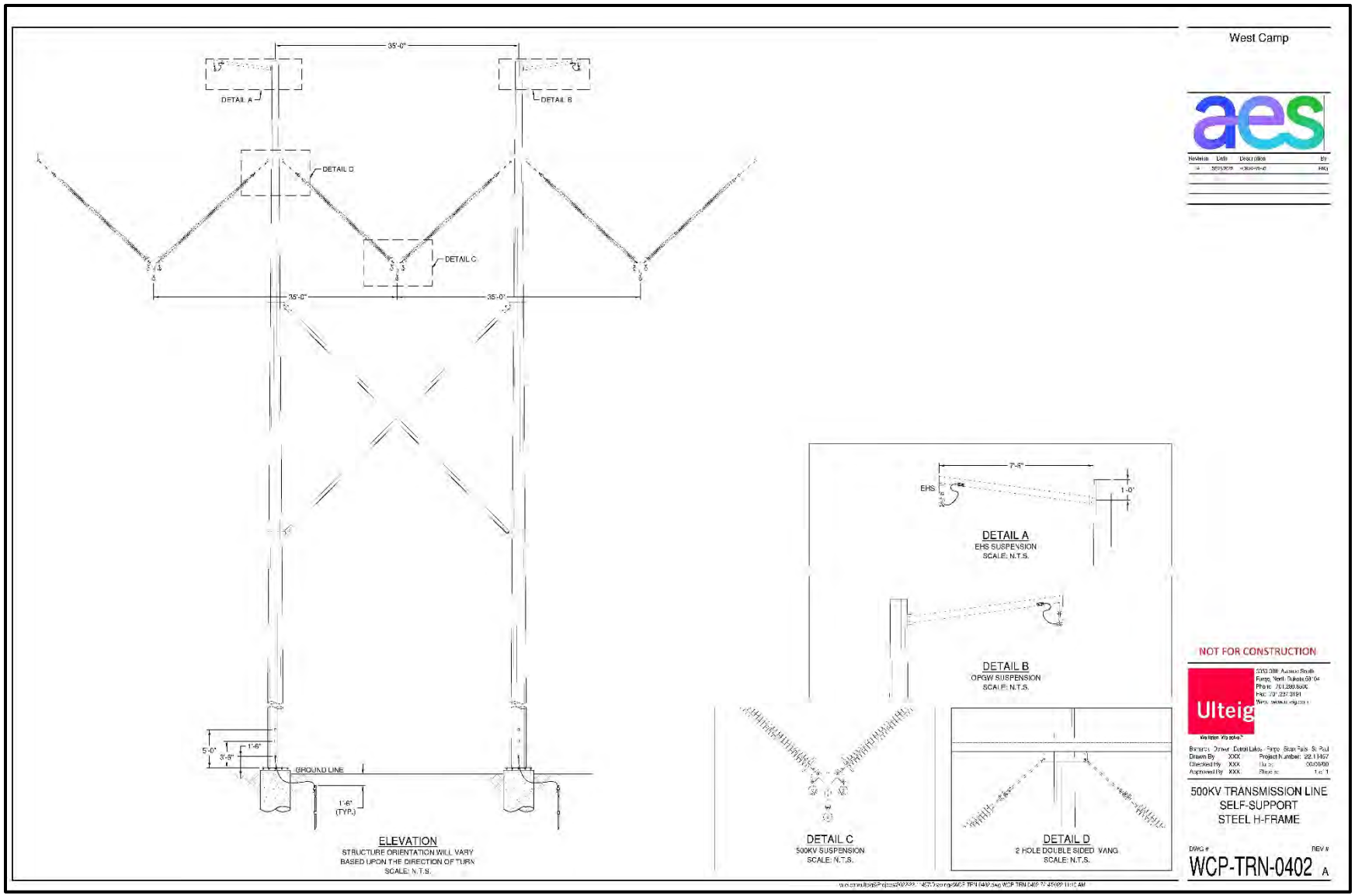


Figure G-9. Typical single-circuit 500-kV tangent structure.

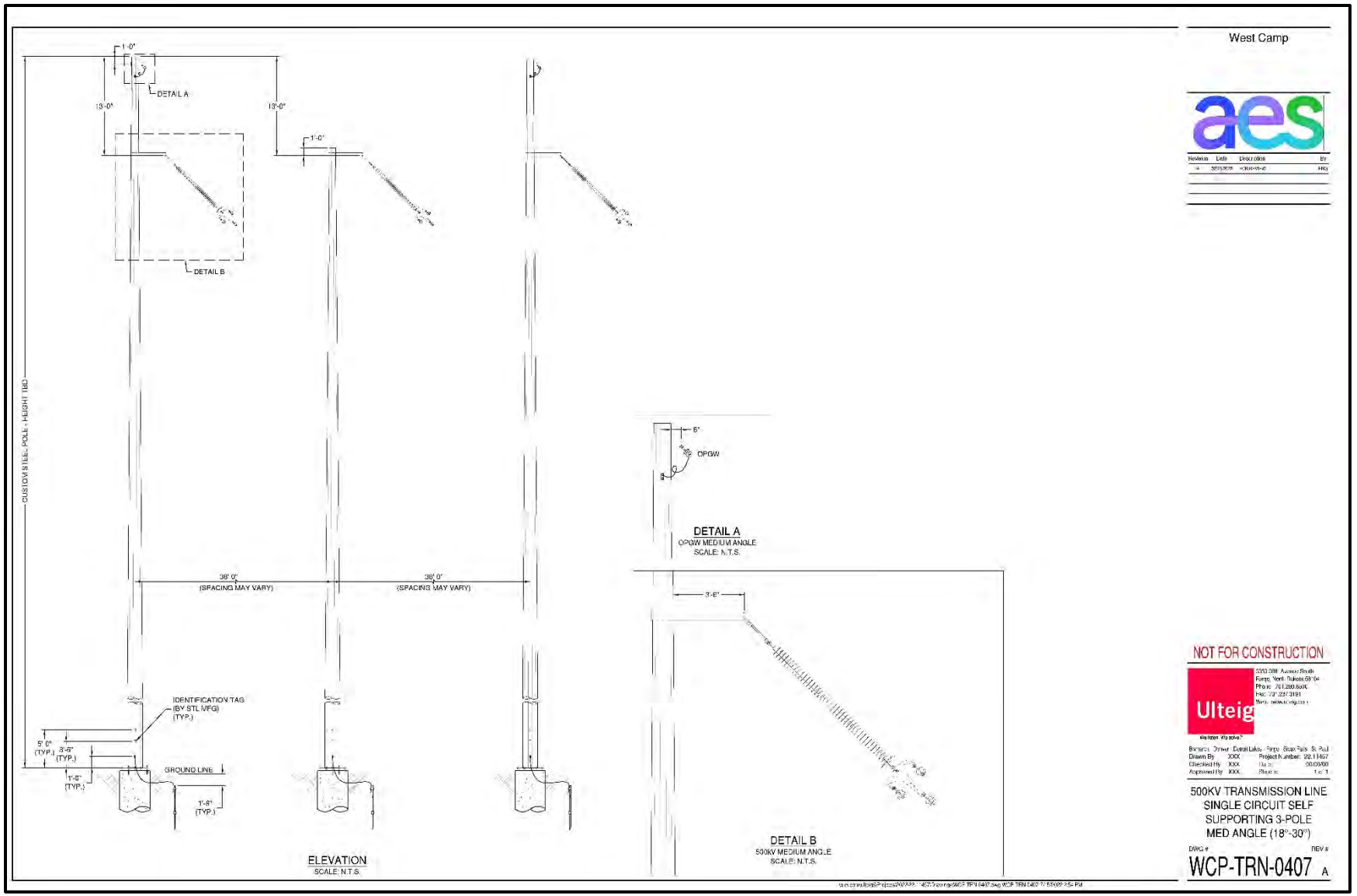


Figure G-10. Typical single-circuit 500-kV turning structure.

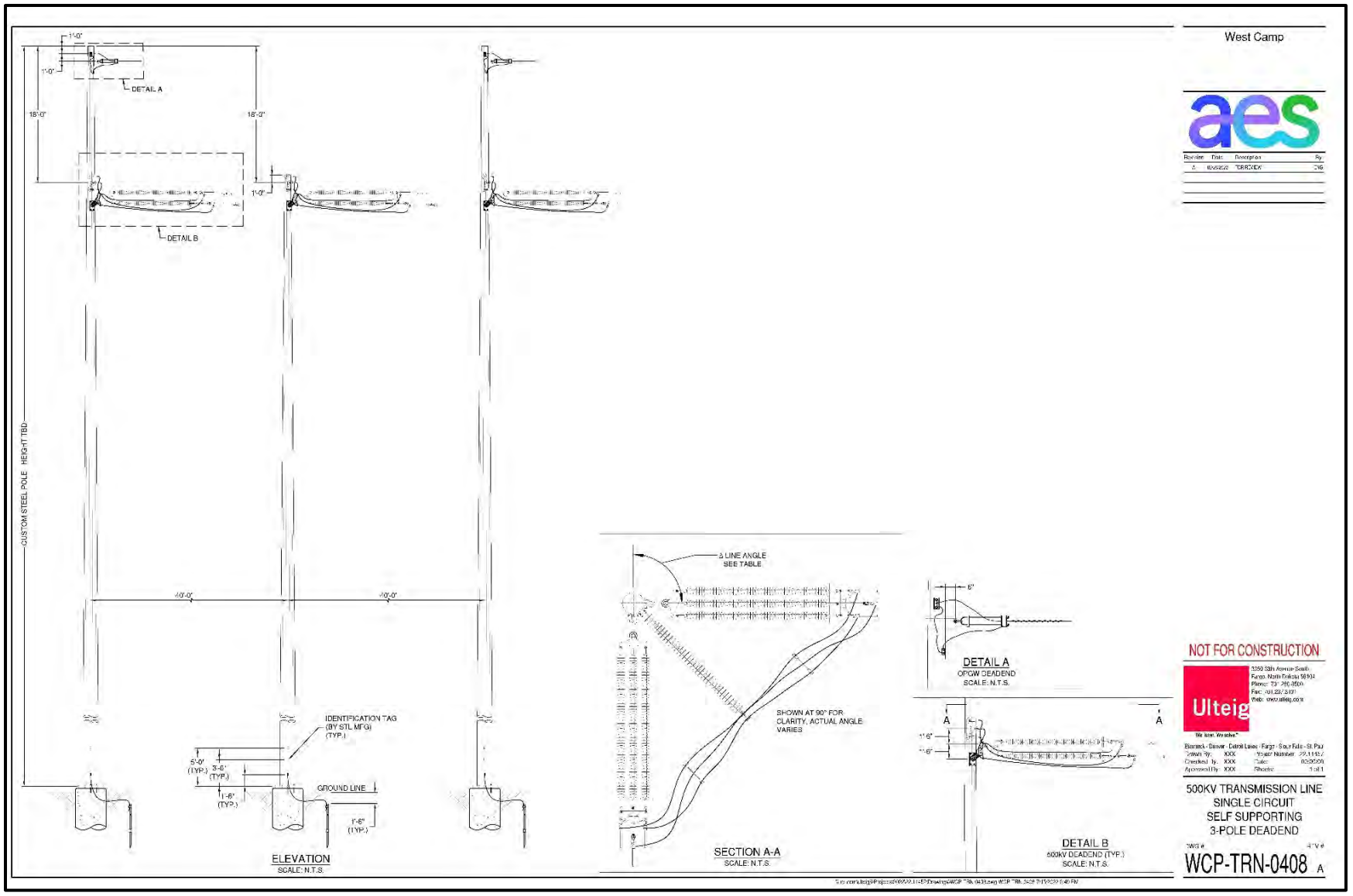
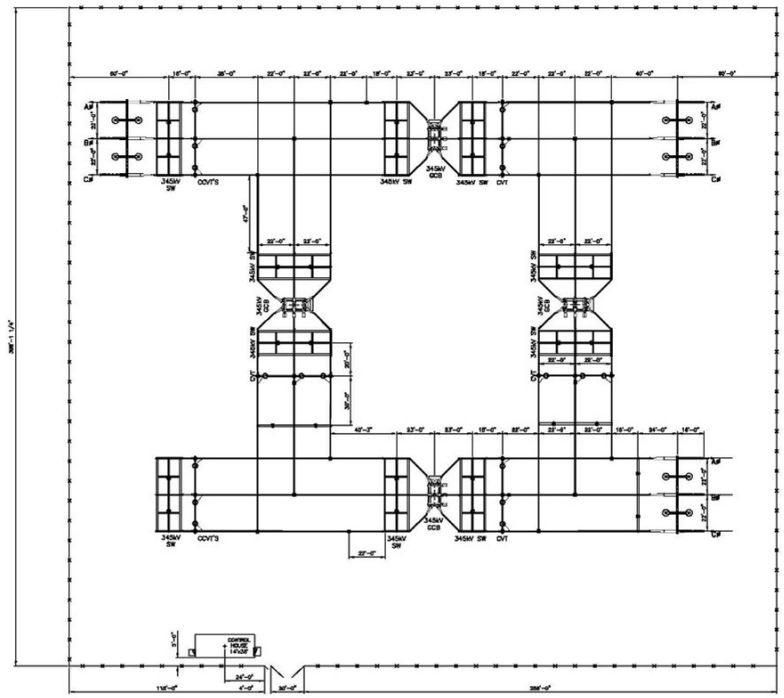


Figure G-11. Typical single-circuit 500-kV dead end structure.



BUS CUTTING SCHEDULE					
SIZE	LENGTH	QTY	TOTAL	CUTTING (LENGTH)	SCRAP
6"	30'-0"	7	210'	(3) 8'	(1) 6'

MINIMUM ELECTRICAL CLEARANCES (IN INCHES) NESC TABLE 124-1 A,C AND NEMA SG-6		
	345kV	34.5kV
ELECTRICAL FLASH OVER DISTANCE		
PHASE TO GROUND	104"	13"
METAL TO METAL (PHASE)	119"	18"
PERSONAL SAFETY DISTANCE		
CLEARANCES ABOVE GRADE	208"	120"

NOTES:

1. STUD CONNECTORS FURNISHED WITH TRANSFORMER AND BREAKERS.
2. DRILL 1/4" DIAMETER HOLES AT LOW POINT OF EACH BUS SECTION.
3. TRANSMISSION LINE DEADEND INSULATOR AND HARDWARE ARE PART OF T-LINE SCOPE. JUMPERS BY SUBSTATION CONTRACTOR.
4. URD CABLES AND TERMINATIONS BY COLLECTION SYSTEM CONTRACTOR.
5. ADD BOLLARDS FOR PHYSICAL PROTECTION OF 8" SCH 40 PVC.
6. FIX WELD (F) 6" BUS BETWEEN FEEDER 2 & 3 BAYS HORIZONTAL RUN. OTHERS SLIP (S).
7. ALL 6" AL PIPE SHALL BE FILLED WITH ONE 1590 AAC DAMPER CABLE.

SCALE: 1/16"=1'-0"
0 5 10
THIS LINE IS ONE INCH WHEN DRAWING IS FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY.

REV	DATE	DWN	CHKD	APVD	DESCRIPTION
A	06/06/19	JKC	VG	VG	PRELIMINARY

CEG CONSULTING ENGINEERS GROUP
LAKEVILLE, MINNESOTA

CHEVELON BUTTE 3
APS 345kV SUBSTATION
ELECTRICAL LAYOUT
PLAN VIEW

SCALE: AS SHOWN	PROJECT: CEGSPOW03
DRAWN: JKC	DWG. NO.
DATE: 06/06/19	APS-CHEV3-EL-01RA

Figure G-12. Conceptual 345-kV switching station general arrangement.

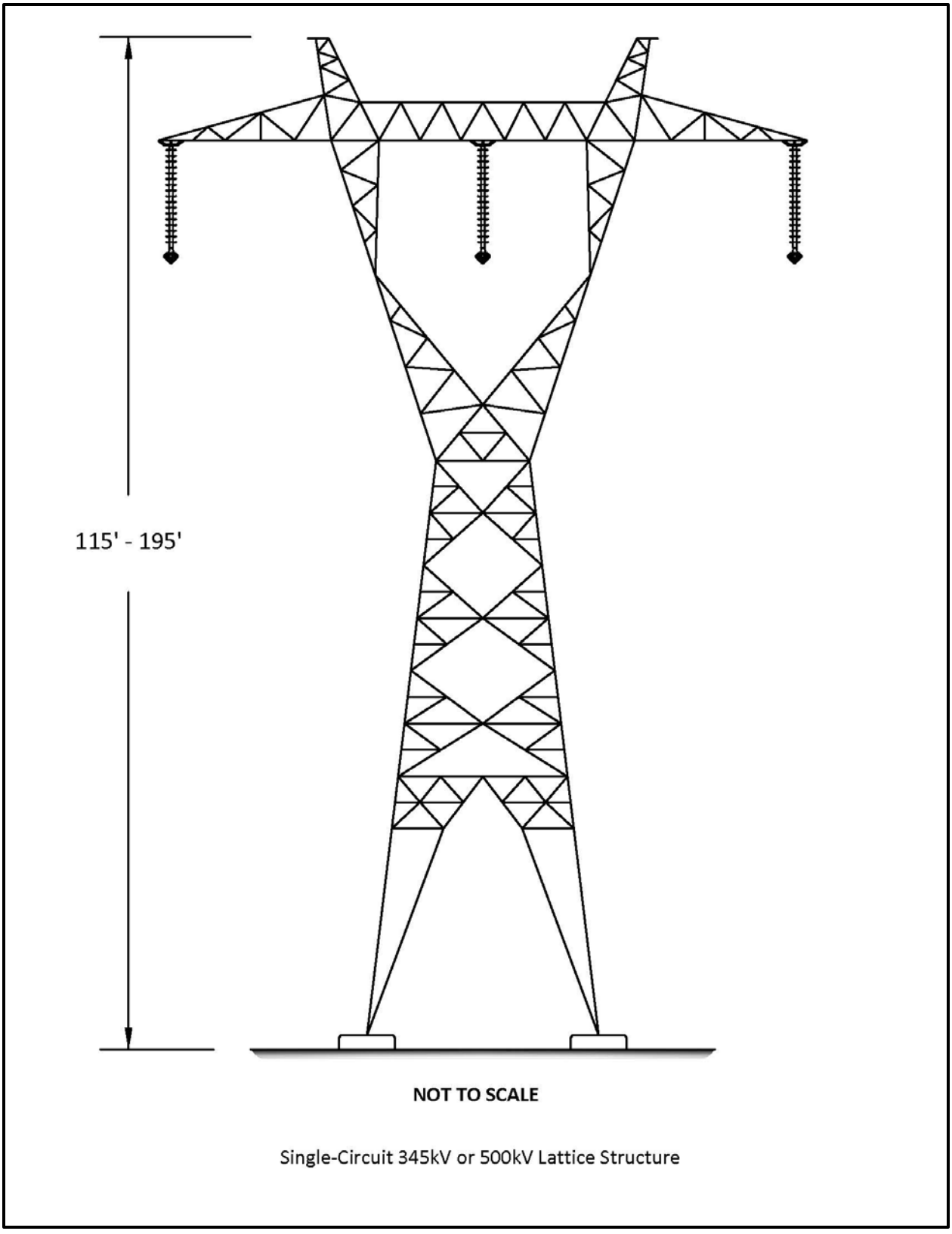


Figure G-13. Single-circuit 345-kV or 500-kV lattice structure.

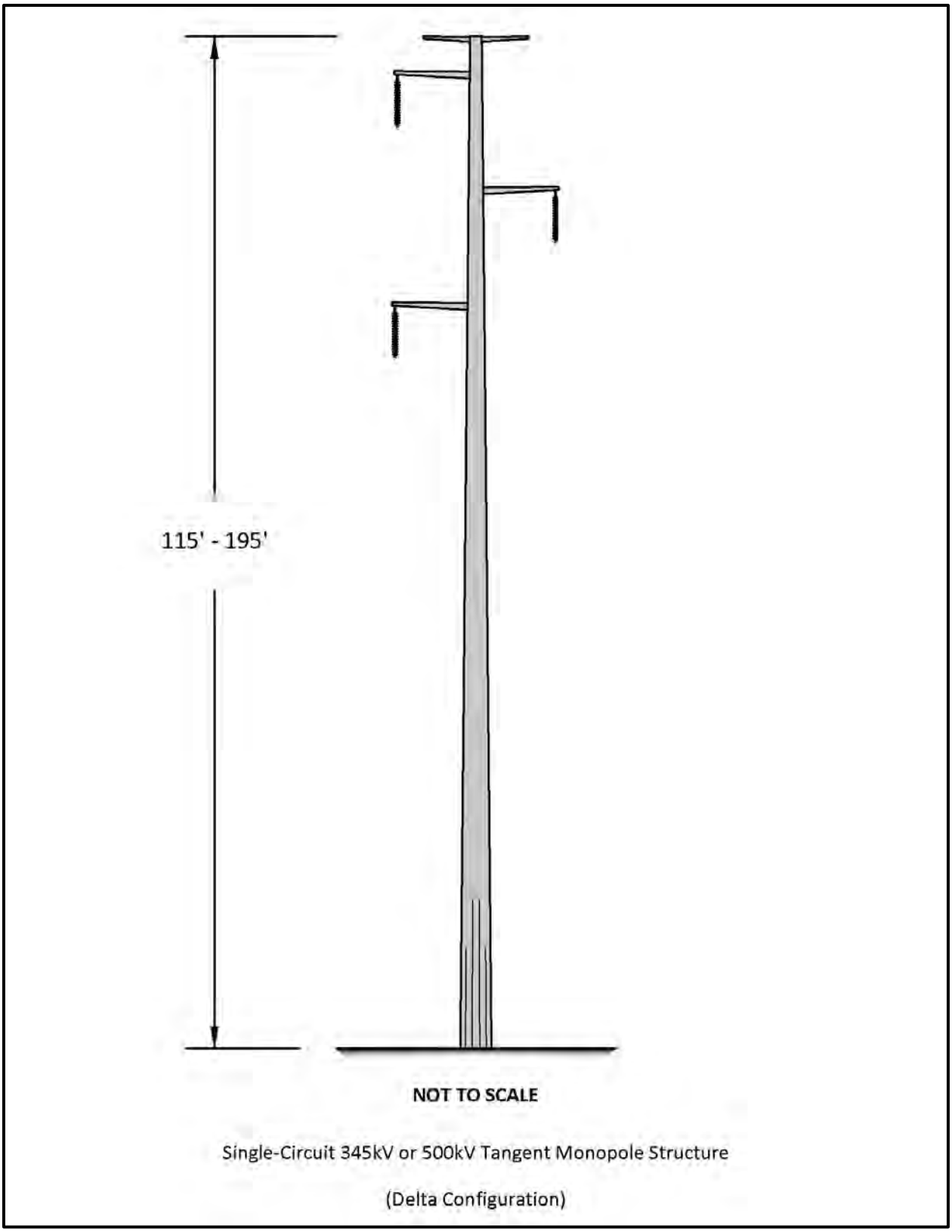


Figure G-14. Single-circuit 345-kV or 500-kV tangent monopole structure (delta configuration).

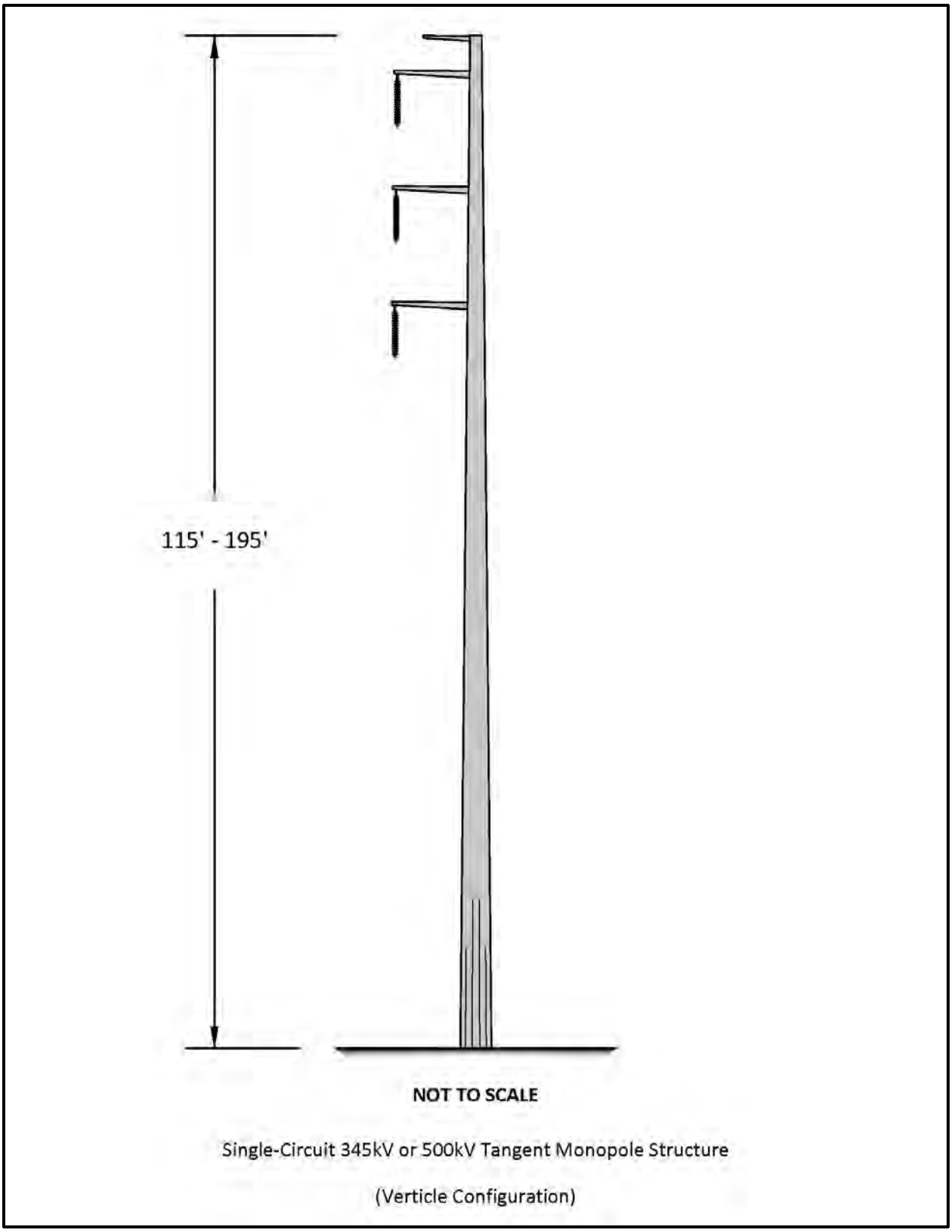


Figure G-15. Single-circuit 345-kV or 500-kV tangent monopole structure (vertical configuration).

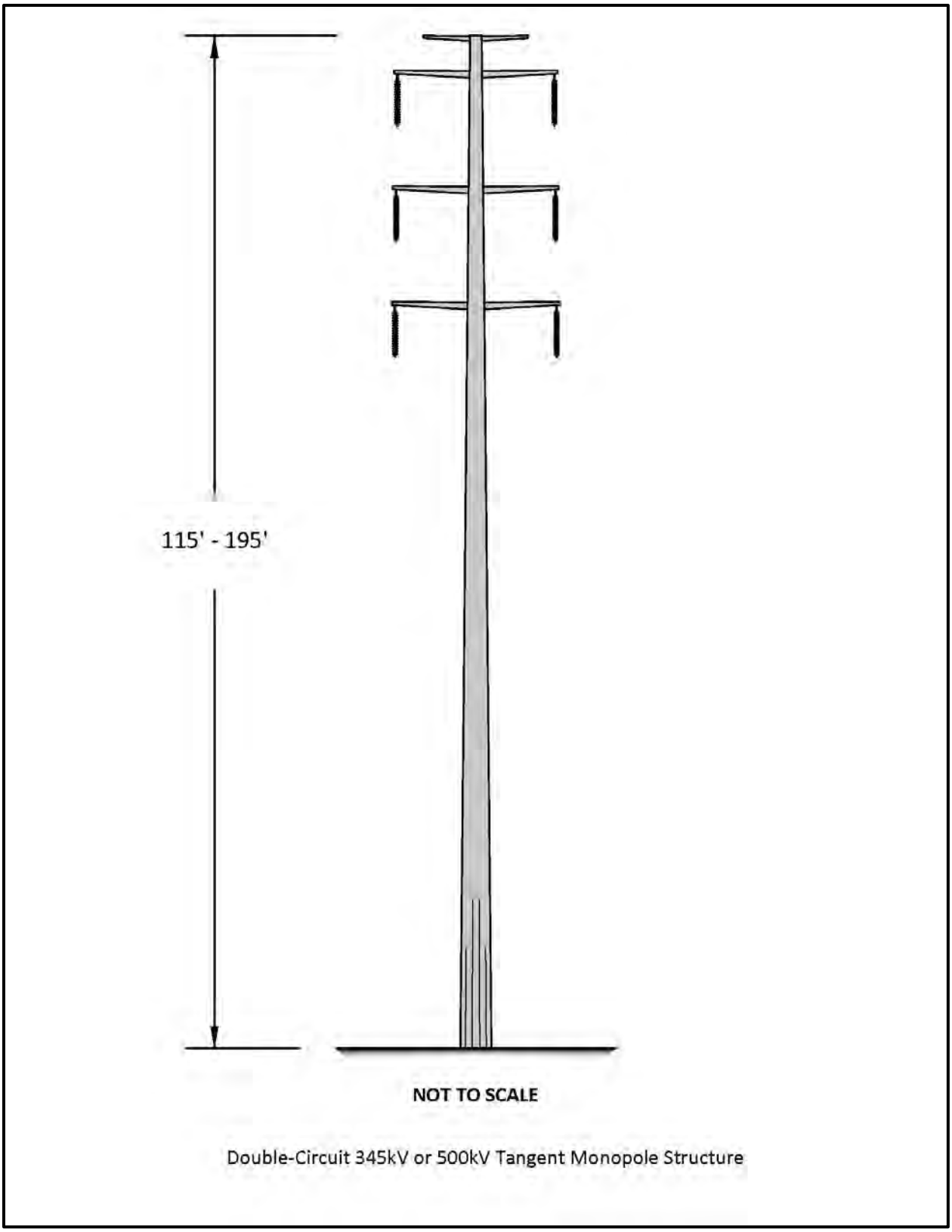


Figure G-16. Double-circuit 345-kV or 500-kV tangent monopole structure.

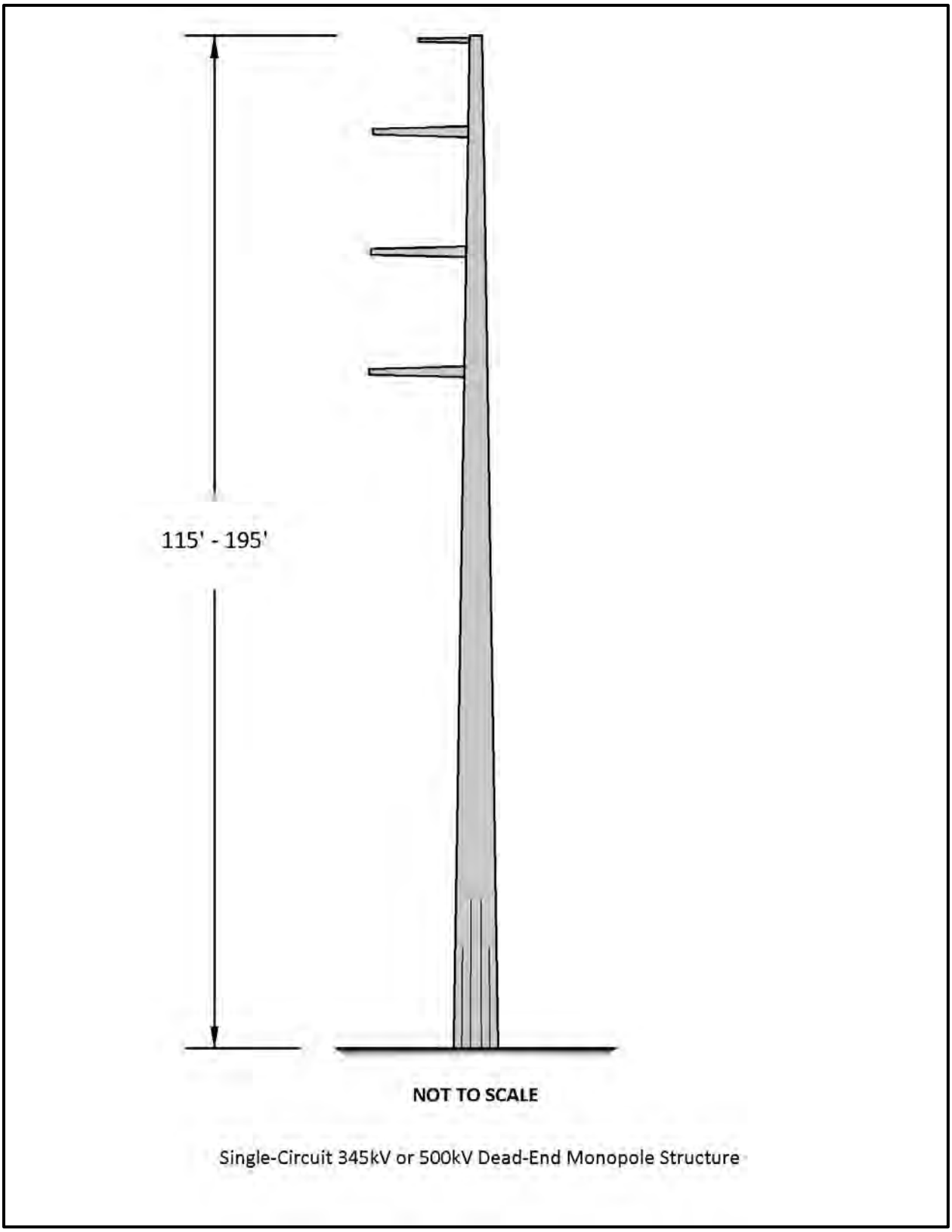


Figure G-17. Single-Circuit 345-kV or 500-kV dead-end monopole structure.

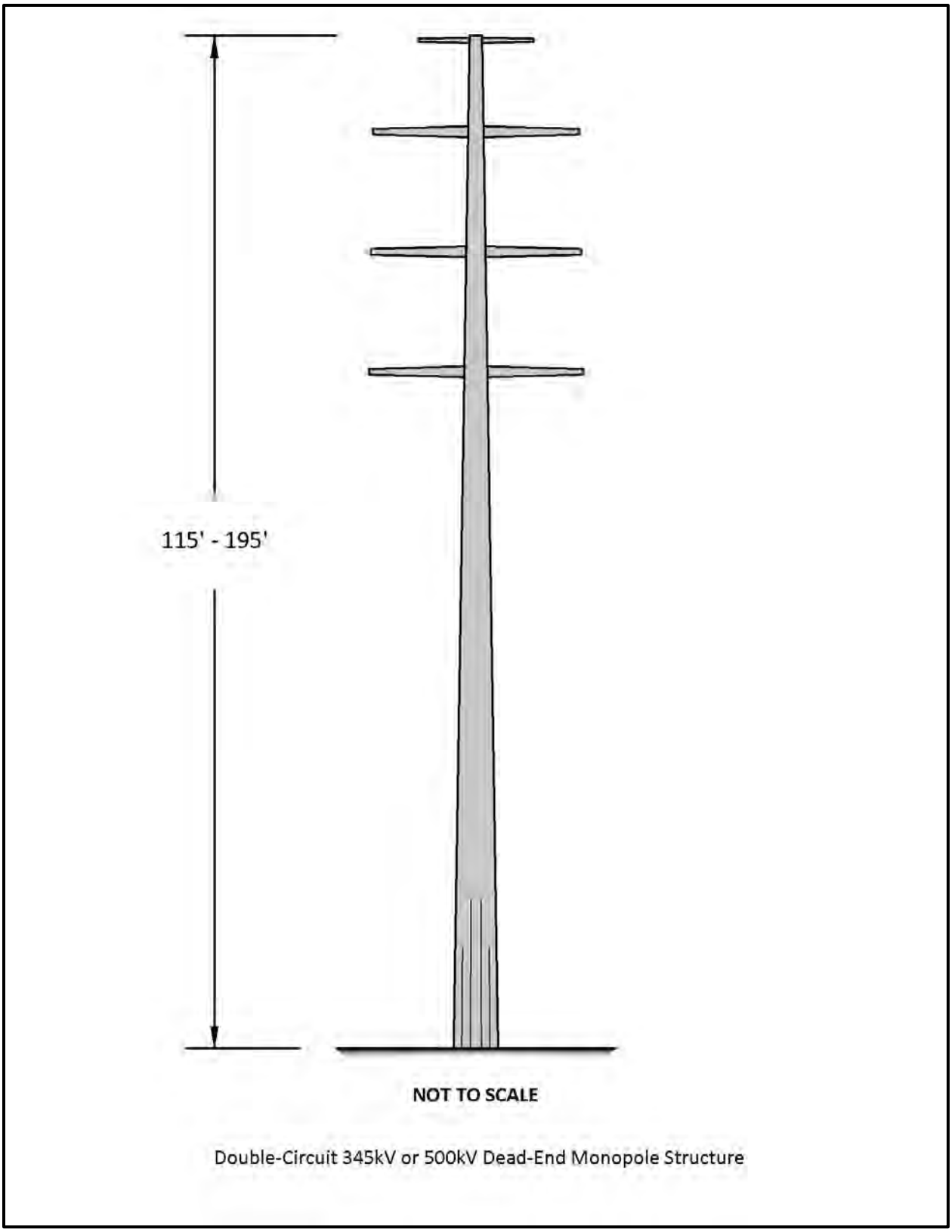
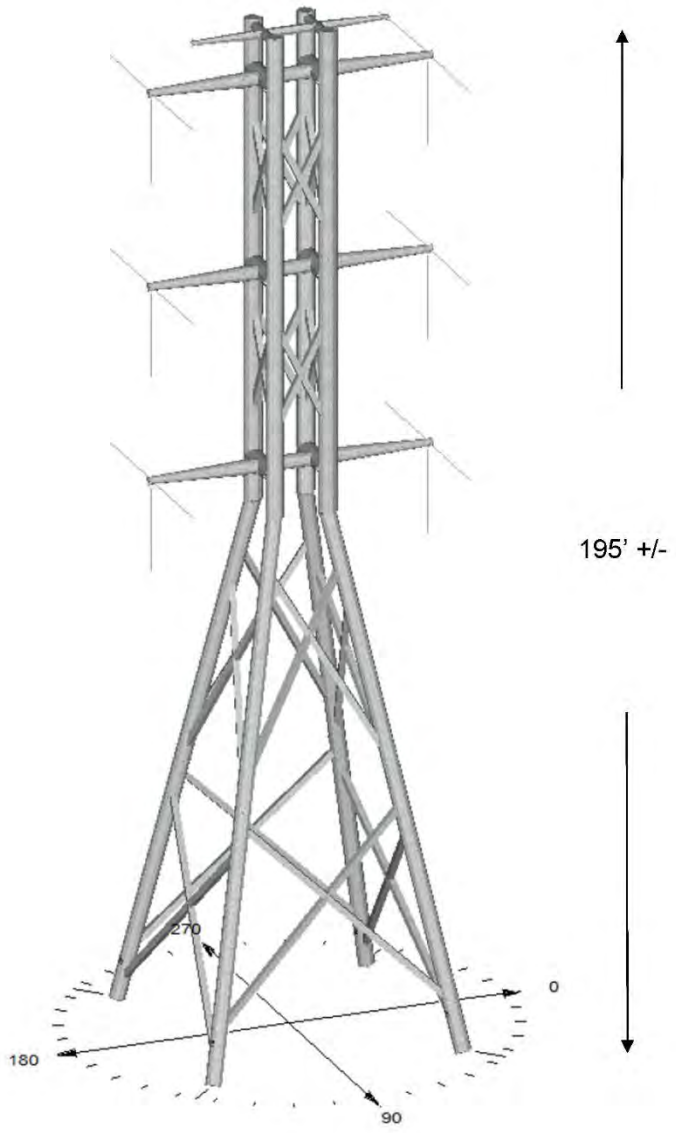


Figure G-18. Double-Circuit 345-kV or 500-kV dead-end monopole structure.



NOT TO SCALE

Double-Circuit 345kV or 500kV Tubular

Structure

Figure G-19. Double-Circuit 345-kV or 500-kV tubular structure.

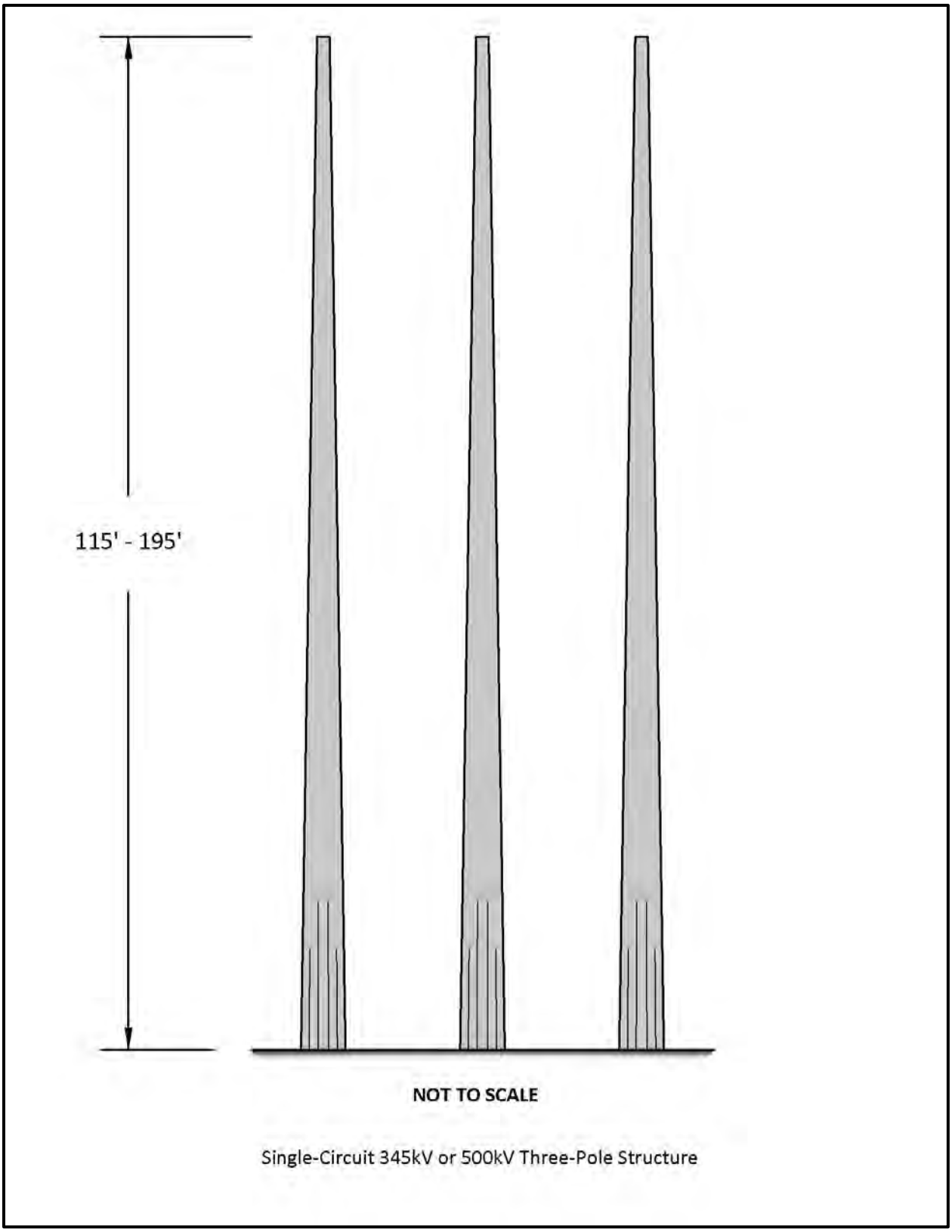


Figure G-20. Single-Circuit 345-kV or 500-kV three-pole structure.

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EXHIBIT H

Existing Plans

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EXHIBIT H. EXISTING PLANS

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

> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

Introduction

The proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) will be located entirely on private land, all of which is within the jurisdiction of Navajo County. Arizona State Trust land and federal land managed by the Bureau of Land Management (BLM) exist in the vicinity (see maps in Exhibit A).

To identify existing plans for other developments at or in the vicinity of the Gen-Tie Project, letters requesting information about planned projects were mailed on July 6, 2022, to the Navajo County Planning and Zoning Department, Arizona State Land Department, Arizona Game and Fish Department, and BLM Safford Field Office (Attachment H-1). No responses were received regarding other planned developments in the area. An online search for existing plans and other developments was conducted as well.

Existing Plans for Other Developments

Three planned development projects requiring state, local, or federal permits were identified within 5 miles of the Gen-Tie Project. They are the Hashknife Solar Energy Center, Obed Meadow Solar Project, and Hot Air Wind Project. All three developments are utility-scale renewable energy projects that would interconnect with the Arizona Public Service (APS) Cholla Substation. All three project sites are in Navajo County within the boundaries of the Aztec Area Plan (See Exhibit A for information about the Aztec Area Plan).

The Hashknife Solar Energy Center, a county-approved 400-megawatt (MW) solar project, is located approximately 1.6 miles south of Joseph City. In January 2021, the Hashknife Energy Center 500 kV Transmission Line Project received Certificates of Environmental Compatibility (CECs; Decision Nos. 77888 and 77889) from the Arizona Corporation Commission for its 500-kV transmission line (Arizona Corporation Commission 2022). Currently under construction, the Hashknife Solar Energy Center is anticipated to begin service in 2023.

The Obed Meadow Solar Project is a planned 200-MW solar power generation facility with an optional 200-MW battery energy storage system and a 2.5-mile, 230-kV transmission line (Avangrid Renewables 2022). Located approximately 1 mile south of Joseph City, the project area brackets the Hashknife Solar Energy Center site, with an approximately 640-acre parcel on the east side and an approximately 1,280-acre parcel on the west side.

The Hot Air Wind Project area is located east of the proposed West Camp Wind Farm. In February 2021, the project developer received Special Use Permits from Navajo County for five meteorological towers located in Section 15, Township 15 North, Range 19 East; Sections 12 and 22, Township 16 North, Range 19 East; and Sections 15 and 35, Township 16 North, Range 20 East (Navajo County Planning and Zoning Commission 2022).

An additional renewable energy development, the 477-MW Chevelon Butte Wind Project (owned by Chevelon Butte RE LLC, which, like the Applicant, is an indirect subsidiary of The AES Corporation), is under construction approximately 15 miles west of the Gen-Tie Project. Located in Navajo and Coconino Counties, the Chevelon Butte Wind Project will tie into the existing APS Preacher Canyon-Cholla 345-kV transmission line. The project received a CEC in October 2019 (Decision No. 77436), amended in December 2021 (Decision No.78388). The project is scheduled to begin commercial operations in 2023.

References

Arizona Corporation Commission. 2022. Docket Details L-21126A-20-0300-00187. Available at: eDocket | Arizona Corporation Commission (azcc.gov). Accessed July 2022.

Avangrid Renewables. 2022. Obed Meadow Solar Project. Available at: https://www.obedmeadowsolar.com/#public. Accessed June 2022.

Navajo County Planning and Zoning Commission. 2022. Minutes P&Z Commission Hearing 2/18/2021. Available at: 2021-02-18_PZ Minutes_Draft.pdf (navajocountyaz.gov). Accessed July 2022.

EXHIBIT H – ATTACHMENT H-1

Agency Outreach Letters

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West Camp Wind Farm, LLC
282 Century Place
Suite 2000
Louisville, CO 80027

July 6, 2022

Ginger Ritter
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086

Re: Request for information regarding existing plans for developments in the vicinity of the proposed West Camp Wind Gen-Tie Project in Navajo County

Dear Ms. Ritter:

I am writing you to request information related to an application being prepared by West Camp Wind Farm, LLC for submittal to the Arizona Corporation Commission for a Certificate of Environmental Compatibility (CEC) regarding a proposed electrical transmission line project to support a wind energy facility.

West Camp Wind Farm, LLC (Applicant), an indirect subsidiary of The AES Corporation, is proposing to construct the West Camp Wind Farm (Wind Farm Site), a maximum 500-megawatt wind energy facility to be located almost entirely on private lands approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona. The Applicant submitted a Special Use Permit application to Navajo County for the Wind Farm in late June 2022. The Wind Farm Site will interconnect with the regional transmission grid via a generation-tie transmission line (Gen-Tie Line). The Gen-Tie Line is subject to a CEC from the Arizona Corporation Commission and the Applicant intends to submit a CEC application in August 2022.

AES is evaluating several Gen-Tie Line options to interconnect the Wind Farm Site to the existing Arizona Public Service (APS) transmission system. The Gen-Tie Line will either interconnect at the Cholla Substation or interconnect via a line tap within the Wind Farm Site to either the APS 345-kV Preacher Canyon-Cholla transmission line or the APS 345-kV Cholla-Pinnacle Peak transmission line (refer to the attached figure). The on-site substations and potential on-site switchyard infrastructure will be sited within the Wind Farm Site in Sections 7, 26, and 34 of Township 16 North and Range 18 East and Section 9 of Township 15 North and Range 18 East. The Gen-Tie Line corridors within the Wind Farm are pending detailed electrical engineering and design. The Gen-Tie Line corridor to the Cholla Substation will be located within a 150-foot-wide easement as shown in the attached figure.

The Gen-Tie Line will be sited entirely on private lands and is co-located to the greatest extent feasible with existing electrical infrastructure. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

AES is requesting any information you may have regarding other planned development within the Gen-Tie Project 5-mile buffer area. The requested information is required by the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, which state:

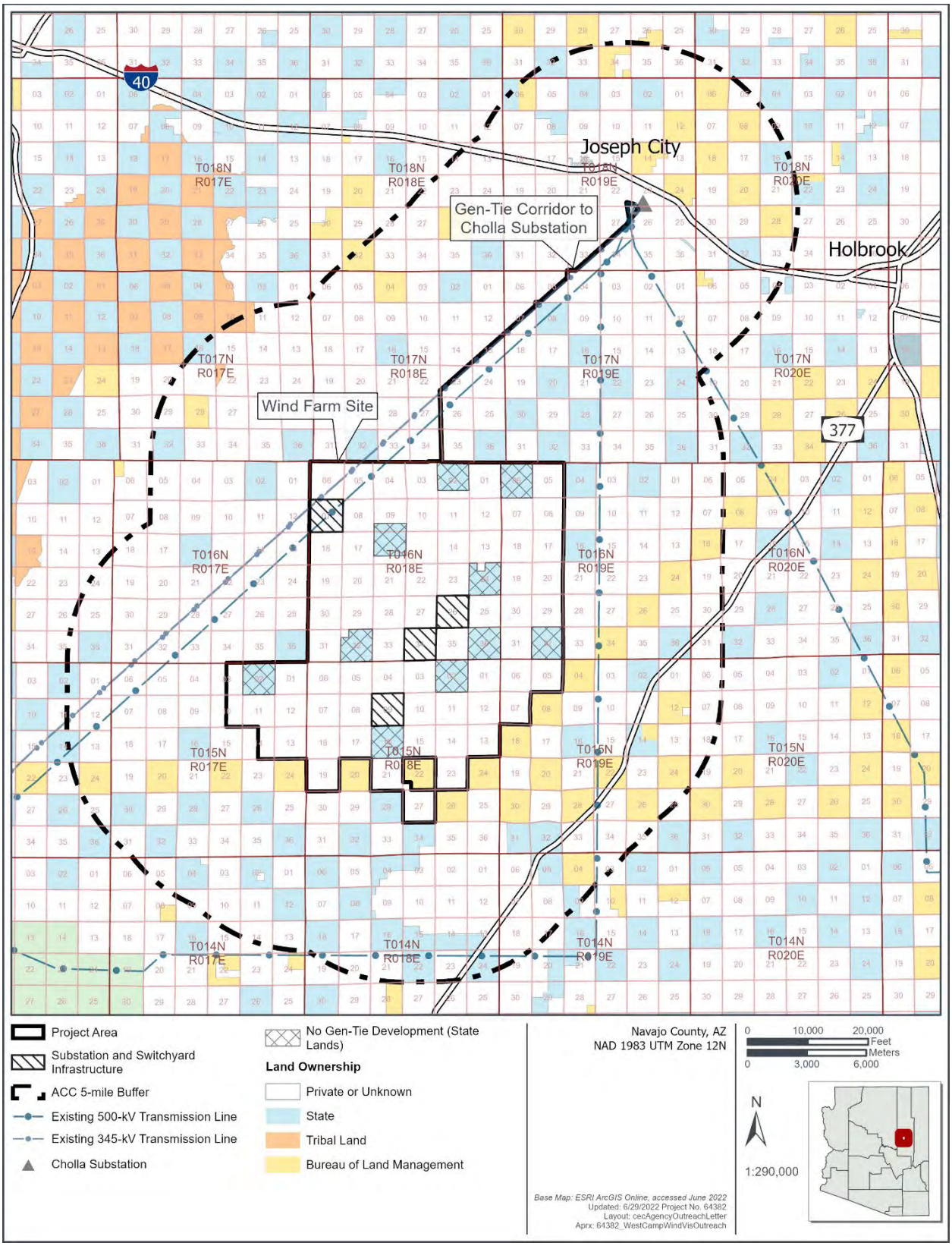
> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

If you are aware of any development plans within the identified buffer area that you can share with us and the Arizona Corporation Commission, we will be very appreciative. Email correspondence can be sent to robert.gardner@aes.com and the mailing address for hardcopy correspondence is:

West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

Sincerely,

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, CO 80027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Gen-Tie Corridor to Cholla Substation
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Base Map: ESRI ArcGIS Online, accessed June 2022
Updated: 6/29/2022 Project No. 64382
Layout: cecAgencyOutreachLetter
Aprx: 64382_WestCampWindVisOutreach

West Camp Wind Farm, LLC
282 Century Place
Suite 2000
Louisville, CO 80027

July 6, 2022

Susan Russell
Arizona State Land Department
1616 West Adams St.
Phoenix, Arizona 85007

Re: Request for information regarding existing plans for developments in the vicinity of the proposed West Camp Wind Gen-Tie Project in Navajo County

Dear Ms. Russell:

I am writing you to request information related to an application being prepared by West Camp Wind Farm, LLC for submittal to the Arizona Corporation Commission for a Certificate of Environmental Compatibility (CEC) regarding a proposed electrical transmission line project to support a wind energy facility.

West Camp Wind Farm, LLC (Applicant), an indirect subsidiary of The AES Corporation, is proposing to construct the West Camp Wind Farm (Wind Farm Site), a maximum 500-megawatt wind energy facility to be located almost entirely on private lands approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona. The Applicant submitted a Special Use Permit application to Navajo County for the Wind Farm in late June 2022. The Wind Farm Site will interconnect with the regional transmission grid via a generation-tie transmission line (Gen-Tie Line). The Gen-Tie Line is subject to a CEC from the Arizona Corporation Commission and the Applicant intends to submit a CEC application in August 2022.

AES is evaluating several Gen-Tie Line options to interconnect the Wind Farm Site to the existing Arizona Public Service (APS) transmission system. The Gen-Tie Line will either interconnect at the Cholla Substation or interconnect via a line tap within the Wind Farm Site to either the APS 345-kV Preacher Canyon-Cholla transmission line or the APS 345-kV Cholla-Pinnacle Peak transmission line (refer to the attached figure). The on-site substations and potential on-site switchyard infrastructure will be sited within the Wind Farm Site in Sections 7, 26, and 34 of Township 16 North and Range 18 East and Section 9 of Township 15 North and Range 18 East. The Gen-Tie Line corridors within the Wind Farm are pending detailed electrical engineering and design. The Gen-Tie Line corridor to the Cholla Substation will be located within a 150-foot-wide easement as shown in the attached figure.

The Gen-Tie Line will be sited entirely on private lands and is co-located to the greatest extent feasible with existing electrical infrastructure. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

AES is requesting any information you may have regarding other planned development within the Gen-Tie Project 5-mile buffer area. The requested information is required by the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, which state:

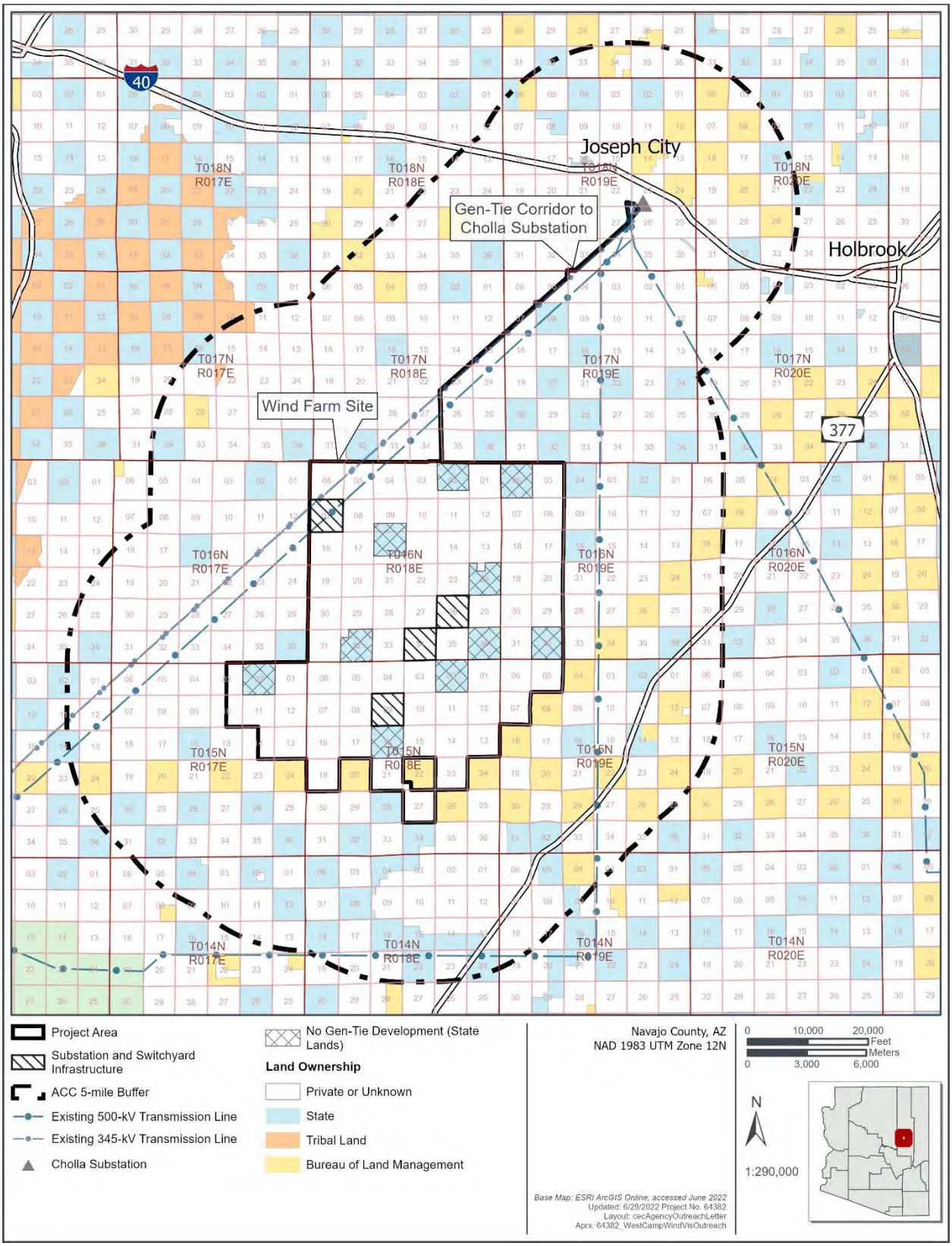
> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

If you are aware of any development plans within the identified buffer area that you can share with us and the Arizona Corporation Commission, we will be very appreciative. Email correspondence can be sent to robert.gardner@aes.com and the mailing address for hardcopy correspondence is:

West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

Sincerely,

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, CO 80027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West Camp Wind Farm, LLC
282 Century Place
Suite 2000
Louisville, CO 80027

July 6, 2022

Ron Peru
Bureau of Land Management
Safford Field Office
711 14th Avenue
Safford, Arizona 85546

Re: Request for information regarding existing plans for developments in the vicinity of the proposed West Camp Wind Gen-Tie Project in Navajo County

Dear Mr. Peru:

I am writing you to request information related to an application being prepared by West Camp Wind Farm, LLC for submittal to the Arizona Corporation Commission for a Certificate of Environmental Compatibility (CEC) regarding a proposed electrical transmission line project to support a wind energy facility.

West Camp Wind Farm, LLC (Applicant), an indirect subsidiary of The AES Corporation, is proposing to construct the West Camp Wind Farm (Wind Farm Site), a maximum 500-megawatt wind energy facility to be located almost entirely on private lands approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona. The Applicant submitted a Special Use Permit application to Navajo County for the Wind Farm in late June 2022. The Wind Farm Site will interconnect with the regional transmission grid via a generation-tie transmission line (Gen-Tie Line). The Gen-Tie Line is subject to a CEC from the Arizona Corporation Commission and the Applicant intends to submit a CEC application in August 2022.

AES is evaluating several Gen-Tie Line options to interconnect the Wind Farm Site to the existing Arizona Public Service (APS) transmission system. The Gen-Tie Line will either interconnect at the Cholla Substation or interconnect via a line tap within the Wind Farm Site to either the APS 345-kV Preacher Canyon-Cholla transmission line or the APS 345-kV Cholla-Pinnacle Peak transmission line (refer to the attached figure). The on-site substations and potential on-site switchyard infrastructure will be sited within the Wind Farm Site in Sections 7, 26, and 34 of Township 16 North and Range 18 East and Section 9 of Township 15 North and Range 18 East. The Gen-Tie Line corridors within the Wind Farm are pending detailed electrical engineering and design. The Gen-Tie Line corridor to the Cholla Substation will be located within a 150-foot-wide easement as shown in the attached figure.

The Gen-Tie Line will be sited entirely on private lands and is co-located to the greatest extent feasible with existing electrical infrastructure. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

AES is requesting any information you may have regarding other planned development within the Gen-Tie Project 5-mile buffer area. The requested information is required by the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, which state:

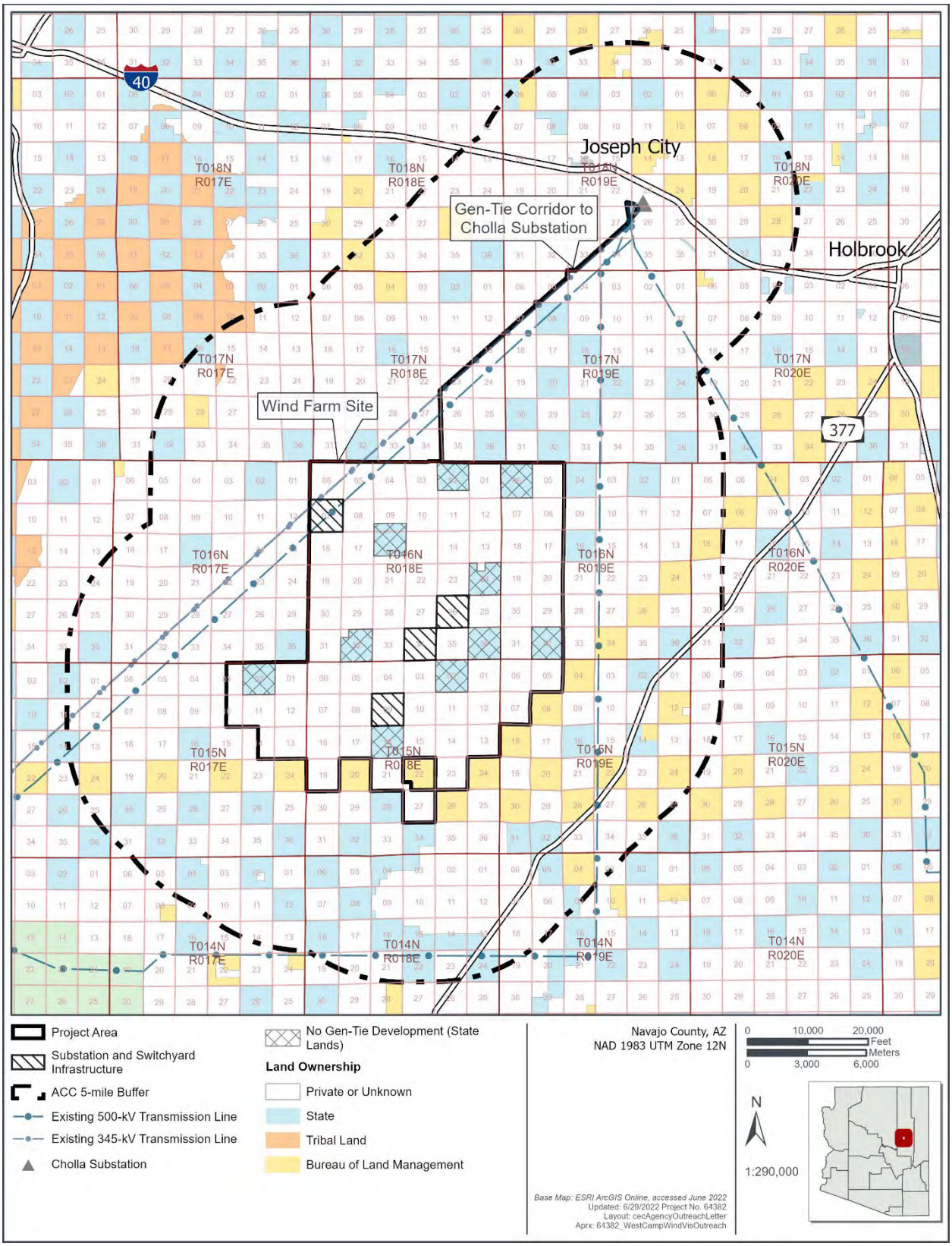
> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

If you are aware of any development plans within the identified buffer area that you can share with us and the Arizona Corporation Commission, we will be very appreciative. Email correspondence can be sent to robert.gardner@aes.com and the mailing address for hardcopy correspondence is:

West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

Sincerely,

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, CO 80027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West Camp Wind Farm, LLC
282 Century Place
Suite 2000
Louisville, CO 80027

July 6, 2022

Sandra Phillips
Navajo County Planning and Zoning Department
P.O. Box 668
Holbrook, Arizona 86025

Re: Request for information regarding existing plans for developments in the vicinity of the proposed West Camp Wind Gen-Tie Project in Navajo County

Dear Ms. Phillips:

I am writing you to request information related to an application being prepared by West Camp Wind Farm, LLC for submittal to the Arizona Corporation Commission for a Certificate of Environmental Compatibility (CEC) regarding a proposed electrical transmission line project to support a wind energy facility.

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The Gen-Tie Line will be sited entirely on private lands and is co-located to the greatest extent feasible with existing electrical infrastructure. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

AES is requesting any information you may have regarding other planned development within the Gen-Tie Project 5-mile buffer area. The requested information is required by the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, which state:

> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

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West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

Sincerely,

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, CO 80027

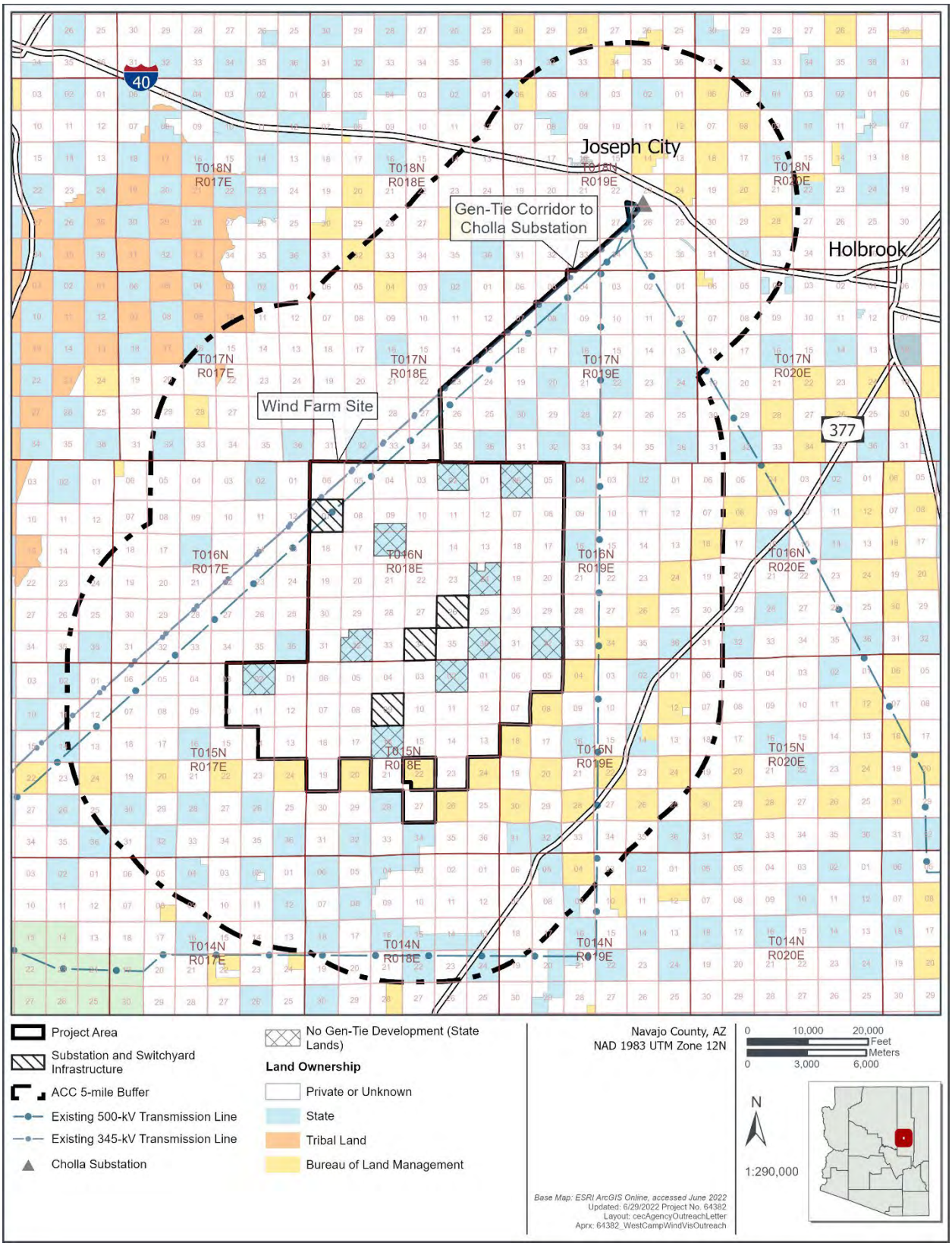
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EXHIBIT I

Noise and Interference

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EXHIBIT I. NOISE AND INTERFERENCE

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

> *Describe the anticipated noise emission levels and any interference with communication signals which will emanate from the proposed facilities.*

Introduction

The proposed West Camp Wind Gen-Tie Project (Gen-Tie Project) comprises a 345- or 500-kV Gen-Tie Line, up to two on-site collector substations, and up to one on-site switching station. The Gen-Tie Project will carry power generated at the proposed West Camp Wind Farm to the existing Arizona Public Service (APS) Cholla Substation or to an existing APS 345-kV transmission line within the Infrastructure Siting Area (see Figure A-2 in Exhibit A). All of the Gen-Tie Project components have the potential to cause noise and interfere with communication signals.

Noise

Ambient Noise Levels

The Gen-Tie Project will traverse rural, largely vacant land used primarily for rangeland (livestock grazing), related ranching activities, and dispersed recreation. Ambient sound levels in such areas are generally quiet, ranging from 23 to 37 A-weighted decibels (dBA) (mean 30 dBA) during nighttime hours and from 33 to 47 dBA (mean 40 dBA) during daytime hours (Eldred 1982). In a preconstruction noise study[1] conducted for the Applicant's Navajo County Special Use Permit, the ambient sound level was found to be 33.6 dBA[2] at a long-term monitoring station located approximately 0.45 mile southwest of the Wind Farm Site and Infrastructure Siting Area (SWCA Environmental Consultants [SWCA] 2022). The noise monitor was placed adjacent to an unpaved road in the sparsely developed Chevelon Canyon Subdivision, approximately 650 feet north of the nearest legal residence. The sound levels recorded at the monitoring station are consistent with a rural environment and considered representative of the surrounding area (SWCA 2022).

Potential sources of noise in the vicinity of the Gen-Tie Project include the existing Arizona Public Service (APS) Cholla Substation, Cholla Power Plant, and three existing high-voltage transmission lines (see Figure A-4 in Exhibit A):

- 345-kV APS Preacher Canyon-Cholla line
- 345-kV APS Cholla-Mazatzal line
- 500-kV APS Saguaro-Cholla line

Additional 69-kV, 230-kV, 345-kV, and 500-kV transmission lines are located near the terminus of the Gen-Tie Line interconnection with the Cholla Substation (Figure A-4 in Exhibit A).

[1] The noise impact assessment was conducted for the West Camp Wind Farm project to satisfy requirements for a Special Use Permit from Navajo County.
[2] Average 1-hour sound level of 33.6 dBA. The daytime average was measured as 35.3 dBA and nighttime average was 27.6 dBA.

Sources of noise at transmission lines include periodic maintenance activities, wind blowing across power lines and power poles, and the "corona effect." Of these sources, the corona effect is the only transmission line–related noise generally noticeable to humans. Corona, the ionization of air close to an energized conductor, may, under certain conditions, result in audible noise. Under dry weather conditions, the audible noise from corona is minor and rarely noticed. During wet and humid conditions, however, water drops collect on the conductors and increase corona activity. Under these conditions, a crackling or humming sound may be heard in the immediate vicinity of the line. Corona activity increases at higher elevations, where the density of the atmosphere is less than that at sea level (Electric Power Research Institute 2005). Corona activity also increases with voltage, so the associated audible sound levels are greater for a 500-kV line than for a 345-kV line. Climate, project elevation, and relative voltages of the proposed and existing transmission lines are all considerations pertinent to the noise assessment for the Gen-Tie Project.

Other sources of noise in the Gen-Tie Project area include ranching activities and light vehicle traffic on ranch roads. These sources of noise are consistent with the ambient rural environment.

Noise-Sensitive Receptors

Noise-sensitive receivers generally are defined as locations where people reside or where the presence of unwanted sound may adversely affect the existing land use. Joseph City, an unincorporated community of approximately 1,900 people, lies approximately 2.0 miles northwest of the Cholla Substation. There are no schools or churches within 1 mile of the Gen-Tie Project. The Joseph City Community Cemetery is located approximately 0.75 miles northwest of the Cholla Substation. The sparsely occupied Chevelon Canyon Ranch Subdivision occurs west of the Gen-Tie Project. Several residences and residential-type structures are scattered throughout the subdivision and within 1 mile of the Gen-Tie Project (see Figure A-X in Exhibit A). The nearest noise-sensitive receptor, a residential-type structure, is located approximately 200 feet west of the Infrastructure Siting Area. The closest legal residence is approximately 0.45 mile west of the Infrastructure Siting Area. The residential type structures shown on Figure A-4 in Exhibit A are also located within 1 to 2 miles of the three existing transmission lines listed above, with the closest structure approximately 400 feet from the APS 500-kV Saguaro-Cholla transmission line.

No noise-sensitive receptors are located within 3 miles from a proposed Gen-Tie Project substation section or within 1.5 miles from the proposed switching station section.

Anticipated Noise During Construction

Ground-based equipment needed to construct a transmission project usually includes heavy earthmoving vehicles, cranes, compressors, generators, and various trucks. The maximum instantaneous construction noise levels from these sources typically range from 80 to 90 dBA at 50 feet from any work site (Crocker and Kessler 1982). At 200 feet, where the closest residential-type structure to the Infrastructure Siting Area is located, sound levels of this magnitude generated at the property line would attenuate to approximately 68–78 dBA.[3] However, it is unlikely that the Gen-Tie Line would be constructed directly adjacent to the property line, and therefore, the distance from construction activities to the closest residential type structure would be greater than 200 feet and the construction noise levels reduced from this estimate. At 0.45 mile from the Infrastructure Siting Area, where the closest legal residence is located, sound levels will attenuate to 46.5 to 56.5 dBA.[4] Sound levels of 50 to 80 dBA have been compared to light traffic at 100 feet (50 dBA) and a garbage disposal at 2 feet (80 dBA) (Beranek 1988).

[3] Sound levels are reduced by 6 dBA with each doubling of distance from the source.
[4] Sound levels are reduced by 6 dBA with each doubling of distance from the source.

Depending on where the Gen-Tie Line is sited, residents habituated to quiet rural conditions may find heavy equipment noise intrusive. However, construction-related noise is short in duration and limited to daylight hours.

In addition to ground-based equipment, a light-duty helicopter will likely be used during the stringing phase of construction for the Little Colorado River crossing. Light-duty helicopters typically generate noise levels of approximately 80 dBA at 200 feet. The nearest residence is approximately 3,600 feet from the area where a helicopter might be used during construction (although the helicopter could pass closer to the residence while transiting to and from the construction site). At a distance of 3,600 feet from the source, estimated helicopter noise would attenuate to approximately 55 dBA and be noticeable. However, as with ground-based construction-related noise, helicopter-related noise would be short in duration and limited to daylight hours.

Anticipated Noise During Operation

During project operation, the transmission lines, substation(s), and switching station will all produce noise. As noted above, the primary noise generated by transmission lines is from the corona effect. Corona noise data are available from 345-kV and 500-kV transmission projects in similar high-elevation (5,000–6,000 feet), semiarid environments. For example, the maximum modeled audible noise within the right-of-way for the Rush Creek Wind 345-kV project in eastern Colorado was 29.5 dBA in fair weather and 51 dBA in wet weather (Pearson n.d.). For the 500-kV Boardman to Hemingway Transmission Line Project in eastern Oregon and western Idaho, modeled estimates were 33 dBA in fair weather and 58 dBA in wet weather (Idaho Power 2013). On the basis of these examples and similar results found elsewhere, corona noise generated by the Gen-Tie Project could range from approximately 30 to 60 dBA, depending on the line voltage and weather conditions. Even in the worst-case scenario (a 500-kV transmission line in wet conditions), 60 dBA of corona noise would drop below the measured rural ambient sound level of 33.6 dBA within 19 feet of the transmission line and 0 dBA at approximately 950 feet from the transmission line. At the nearest noise-sensitive receptor, a residential-type structure, located approximately 200 feet west of the Infrastructure Siting Area, corona noise from the Gen-Tie Line would be either indistinguishable from ambient sounds or inaudible, depending on the final siting of the line.

Corona effects during wet weather also occur at substations, but transformers are usually the main source of noise, particularly at step-up substations. Transformers of the type needed at the project substation(s) typically generate noise levels ranging from 60 to 80 dBA (McDonald 2012). The loudest of these sound levels would drop below the measured rural ambient sound level of 33.6 dBA within approximately 200 feet of a substation and be inaudible at the nearest noise-sensitive receptor approximately 3 miles from a proposed substation section.

If the on-site interconnection is selected, the switching station would employ generally quiet technology (gas circuit breakers and CVT/CCVT transformers) (see Figure G-12 in Exhibit G). Any sounds generated at the switching station would be inaudible at the nearest noise-sensitive receptor 1.5 miles away.

Communication Interference

Transmission line corona effects associated with the proposed Gen-Tie Line could interfere with amplitude modulation (AM) radios close to the line. Frequency modulation (FM) radio is rarely affected at all. Vehicles traveling on the unpaved ranch roads traveling under or adjacent to the Gen-Tie Line may experience radio interference, but AM radio frequency interference typically dissipates rapidly with increasing distance from the source.

Radio and television reception in local homes is not expected to change as a result of the Gen-Tie Project. As described above, the residential-type structures shown on Figure A-4 in Exhibit A are also located within 1 to 2 miles of the three existing transmission lines listed above, with the closest structure approximately 400 feet from the APS 500-kV APS Saguaro-Cholla transmission line. If residences with broadcast television are not currently experiencing interference from the existing lines, they will be unlikely to experience interference from the Gen-Tie Project. If they do experience interference from the existing lines, the Gen-Tie Project will be unlikely to increase interference beyond that of the three existing lines. In any event, rural residents are more likely to be receiving television by satellite than broadcast. Satellite television frequencies are much higher than transmission line frequencies and are not affected by transmission line operation or corona. Cable television service is likewise unaffected.

Transmission lines do not interfere with cellular phone tower operations or microwave communication paths. This is demonstrated by the fact that cellular phone antennae and microwave receivers are commonly mounted on transmission structures to take advantage of the added height afforded by the structures.

References

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Crocker, M.J., and F.M. Kessler. 1982. *Noise and Noise Control, Volume II*. Boca Raton, Florida: CRC Press, Inc.

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EXHIBIT J

Special Factors

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EXHIBIT J. SPECIAL FACTORS

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

> *Describe any special factors not previously covered herein, which applicant believes to be relevant to an informed decision on its application.*

Public Involvement

This section includes information on the public involvement program that is being conducted for the West Camp Wind Gen-Tie Project (Gen-Tie Project). Public outreach efforts began in May 2022 to provide information to agencies and individuals, solicit information, and identify potential issues relative to the West Camp Wind Farm Project and the Gen-Tie Project. Agency and tribal coordination began in February 2022.

To date, public involvement is being conducted in support of the Applicant's Special Use Permit (SUP) application to Navajo County and the Certificate of Environmental Compatibility (CEC) application. The SUP application includes a Citizen Participation Plan, initiated at the onset of the planning process, to ensure that local jurisdictions and community residents are provided with the opportunity to relay information or potential concerns. Public mailings, legal notices, a project website, community flyers, and public meetings are being used to reach the affected communities. By providing the public with opportunities to access project information and relay comments, the project team can identify potential issues to address through the planning process and environmental studies. In addition to the public outreach conducted through this process, the Applicant has met individually with numerous groups and individuals to educate them about the project and to seek input.

Notices of Public Meetings

As of this writing, two public meetings have been held to satisfy the requirements of the Navajo County SUP. The meetings, both of which occurred on May 24, 2022, in Holbrook, Arizona, were announced through a legal notice posted in a local newspaper, a public mailing, and the project website. The legal notice was published in *The Tribune* (serving Navajo County) on May 11, 2022, 14 days prior to the public meeting.

In the mailing, public meeting notices were sent to property owners of record within 1 mile of the proposed West Camp Wind Farm Project. The public meeting notice included a project description, general location and facility plan map, public meeting invitation, project website information, and contact information. The mailing went to owners of property (mostly vacant) located within 1 mile of the West Camp Wind Farm Project (105 mailings), as required by the Navajo County Wind Ordinance.

The public meeting notices were also sent to the following agencies and officials:

- Navajo County Commissioners
- Navajo County Planning & Zoning Department Staff
- Navajo County Building Department Staff
- Arizona Game and Fish Department
- Arizona State Land Department

- Apache-Sitgreaves National Forests
- Arizona State Historic Preservation Office (SHPO)
- U.S. Fish and Wildlife Service (Region 2 Migratory Birds, Albuquerque Office and Arizona Ecological Services Office)
- Bureau of Land Management (BLM) Safford Field Office

Notices were mailed on May 6, 2022. A copy of the public meeting notice is included as Attachment J-1.

Tribal Outreach

Despite no federal permitting nexus and Section 106 National Historic Preservation Act tribal consultation requirements, the Applicant voluntarily contacted eight tribal groups (listed below) to inform them about the proposed West Camp Wind Farm Project. The Hopi Tribe expressed interest in further involvement and learning more about the project.

- Fort Mojave Indian Tribe
- Hopi Tribe
- Mescalero Apache Tribe
- Navajo Nation
- Pueblo of Zuni
- Salt River Pima-Maricopa Indian Community
- Tonto Apache Tribe
- White Mountain Apache Tribe

Public Meetings

Two public meetings were held on May 24, 2022, in Holbrook, Arizona. The meetings were informal "open house" style formats, allowing community members to attend at their convenience, review displays, and speak with members of the project team. All attendees were recorded on an official sign-in sheet upon entering the meeting.

Materials for presentation at the meeting included the following poster displays:

- Applicant Company Information
- West Camp Wind Farm Project Overview
- West Camp Wind Farm Environmental Studies and Agency Coordination
- West Camp Wind Farm Overview Map
- West Camp Wind Farm Site Map
- Preliminary Visual Simulations (five poster boards)

Comment forms were provided to solicit public comment regarding the project and the information that was presented. A project information handout was also distributed when requested by attendees. Meeting materials are included in Attachment J-1.

Another public notice meeting was voluntarily conducted in Joseph City on August 4, 2022. This meeting was for local community leaders to learn more about the project and give any input they desire. This meeting was in addition to all explicit requirements from Navajo County or the Arizona Corporation Commission.

Gen-Tie Project Outreach Mailing

Public notification letters were sent to property owners of record within 1 mile of the proposed Gen-Tie Project (126 mailings). The notification letter was also sent to 15 local, state, and federal agencies. The notification letter included a project description, general location and facility plan map, project website information, request for public comment, contact information.

Notices were mailed on July 6, 2022. A copy of the public notice is included as Attachment J-2.

Comments Received

At the time of the Navajo County SUP application submittal in late June 2022, no public comments were received on the project. Following the notice of public meeting, the Applicant was contacted by two members of the public. One inquiry was for additional maps, and the other was for additional information on the location of turbines, turbine setbacks from residences, and public access on Hutch Road. The Applicant provided additional maps and verbally responded to the Gen-Tie Project inquiry. No additional follow up was received. The Applicant also received a phone call from an Arizona Game and Fish Department staff member inquiring about a "virtual open house" option for the public meetings. The Applicant responded that there would not be a virtual open house and relayed further information about the in-person public open house. As described above, the Hopi Tribe responded to the tribal outreach and expressed interest in further involvement and learning more about the project. Two agencies provided written (email) comments regarding the project. The BLM Safford Field Office provided a comment regarding access to the project east from Arizona State Highway 377. The SHPO provided a comment regarding cultural resource investigations and requested to review the reports when investigations have concluded.

Following the Gen-Tie Project outreach July 2022 mailing, the Applicant received five comments through the project website and one hard copy letter. One public comment expressed general support for the West Camp Wind Farm Project. Two of the comments were from neighboring landowners regarding visual impacts of the wind turbines relative to specific parcels in the Chevelon Canyon Ranch Subdivision. The Applicant responded to those comments with Wind Farm visual simulations and information about the Aircraft Detection Lighting System produced as part of the Navajo County West Camp Wind Farm SUP application. One commenter said neighboring landowners explicitly stated that they no longer had concerns about the visual impacts related to the project after receiving additional information. A fourth commenter requested information about impacts to avian species. The Applicant responded to the commenter with additional information about the permitting process and compliance steps, as well as best available science information for wind projects and avian impacts. The fifth and sixth comments were submitted by the same commentor and related to the Navajo County SUP process and dates of public meetings, as well as expressing general opposition to the project. The Applicant responded to the commenter with a link to the project website for the most updated information on public meeting dates.

The comments and the Applicant's response are provided in Attachment J-3. The Applicant will continue to coordinate with the BLM and Navajo County regarding access to the project and with SHPO regarding cultural resources.

Letters from the Arizona Game and Fish Department are provided in Exhibit C.

Project Website

The Applicant developed a project website that contains project description information, including information presented at the public meeting, and a mechanism for public comment submittal. The website location, which was announced in the legal notice and public mailings, provides an opportunity for persons unable to attend the public meeting to learn about the project and provide comments.

Additional Stakeholder Briefings

Project briefings with stakeholders included numerous meetings held over the course of nearly a year with landowners; local, state, and federal agencies; and other local organizations. A summary listing of the key meetings conducted to date is included in Table J-1 below. Note that ongoing and frequent coordination is occurring with various stakeholders and agencies, and is planned to continue throughout the development, construction, and operational phases of the project.

Table J-1. Stakeholder Briefings

Date	Representative Organization or Agency	Location
February and March 2022	Navajo County – meteorological tower permitting and public hearings	Holbrook, Arizona
March 28, 2022	Arizona Corporation Commission – Commissioner and Chief of Staff meetings	Phoenix, Arizona
March 28, 2022	Navajo County – County Supervisor meeting	Phoenix, Arizona
March 29, 2022	Navajo County – pre-application conference	Holbrook, Arizona
April 4, 2022	Navajo County – County Supervisor meeting, Holbrook Chamber of Commerce meeting, Winslow Chamber of Commerce meeting	Holbrook, Arizona
May 4, 2022	Public notification letter sent to identified landowners within 1 mile of the West Camp Wind Farm Project and to local, state, and federal agencies.	
May 11, 2022	Community and public open house legal notice published in *The Tribune*	Holbrook, Arizona
May 10, 2022	Outreach letters sent to eight potentially interested tribes identified by the SHPO	
May 10, 2022	Joseph City – Virtual project briefing with Joseph City School District members	
May 18, 2022	U.S. Fish and Wildlife Service Region 2 and Arizona Game and Fish Department – wildlife survey plan consultation	Flagstaff, Arizona
May 24, 2022	Community and public open houses hosted	Holbrook, Arizona
July 6, 2022	Public notification letter sent to identified landowners within 1 mile of the Gen-Tie Project and to local, state, and federal agencies.	
July 6, 2022	Outreach letter sent to agencies with jurisdiction within 5 miles of the Gen-Tie Project seeking input on planned land uses (see Exhibit H).	
July 22, 2022]	Outreach emails sent to various Joseph City community leaders and public notice released by the Joseph City Unified School District (JCUSD) for the below public meeting.	
August 4, 2022	Joseph City – in-person project briefing held with various community leaders, including JCUSD Superintendent, JCUSD Business Manager, and Navajo County Government Relations Director	Joseph City, Arizona
August 18, 2022	Navajo County Planning and Zoning Commission Public Hearing for the West Camp Wind Farm SUP	Holbrook, Arizona

EXHIBIT J – ATTACHMENT J-1

Notice to Neighboring Landowners of Public Meetings (May 24, 2022) and Public Meeting Materials

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May 4, 2022

AES
282 Century Place
Suite 2000
Louisville, CO 80027

Dear Neighbor,

AES is applying for a Special Use Permit from Navajo County and a Certificate of Environmental Compatibility from the Arizona Corporation Commission to construct and operate the West Camp Wind Farm and associated gen-tie line, a maximum 500-megawatt wind energy facility to be located almost entirely on private lands approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona, as shown in the attached figure.

The West Camp Wind Farm would be comprised of up to 104 wind turbines, and would include a parking area, storage facilities, an operations and maintenance building, access roads, permanent meteorological towers, and an Aircraft Detection Lighting System (ADLS). The project's generated electricity would connect to the power grid at the Arizona Public Service Cholla substation via an approximately 15-mile-long generation-tie line located north of the project area, which is planned to parallel existing high voltage infrastructure outside of the wind farm project boundary. Energy generated by the wind facilities and energy stored in the battery storage facilities would be routed to up to two project substations via 34.5-kV underground collection lines. The wind turbine generators would have a total system height of up to 820 feet. The project is sited in a remote location and incorporates a setback from the project boundary. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

Wind energy is building a cleaner future and creating economic benefits for all Arizonans. The West Camp Wind Farm would bring many local and state benefits, including:

- 500+ construction jobs and 20-30 full-time local positions during the 25+ year operating life at full buildout
- Property taxes and other local economic benefits for Navajo County
- Lease payments to rural ranching families
- The project is being designed to avoid impacts to sensitive environmental and cultural resources and sited to minimize impacts to residential areas
- At full buildout, the project will generate electricity equivalent to powering over 300,000 homes annually, with no operational air emissions or water use
- The property will remain a cattle ranch and the installation of wind facilities will not preclude or dramatically change existing land uses

Public Open House

Before submittal of permit applications with Navajo County and the Arizona Corporation Commission, we are interested in receiving public input on the project and will be hosting two community open houses. The public open house meetings will be held on Tuesday, May 24th. Both public meetings will be held at the Holbrook Recreation Center Gymnasium, with the first meeting occurring from 12:00 p.m. – 2:00 p.m., and the second meeting occurring from 5:00 p.m. – 7:00 p.m. AES and county representatives will attend each meeting and will be available to answer questions from the public. We cordially invite you to attend one of the community open houses described below to learn more about the West Camp Wind Farm, and to provide input.

Tuesday, May 24th
12:00 – 2:00 p.m. **and** 5:00 -7:00 p.m.
Holbrook Recreation Center Gymnasium
465 N 1st Avenue, Holbrook, AZ 86025

Submit Comments

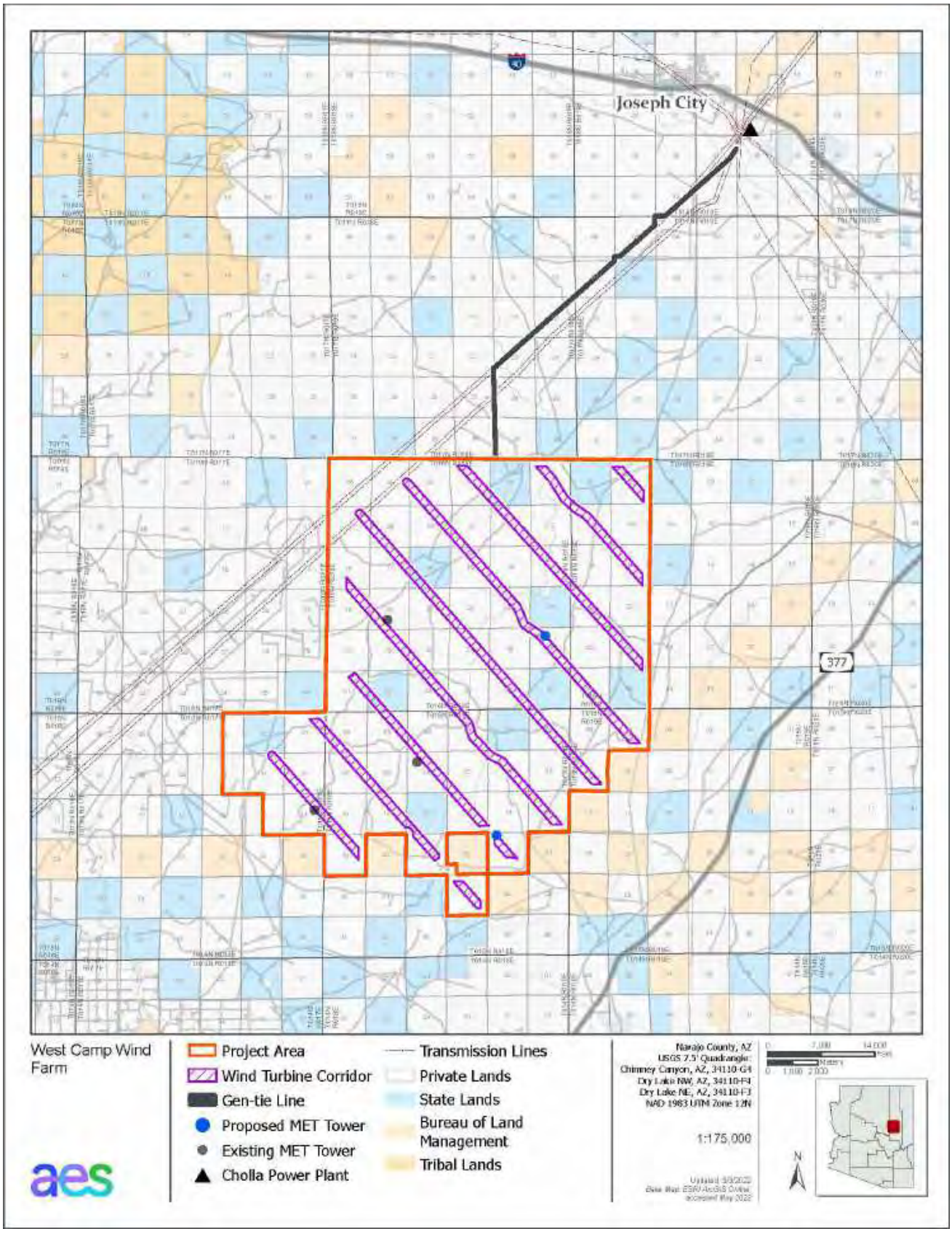
To submit comments, please go to the project website at https://www.aes.com/west-camp-wind or mail comments to the address below:

West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

After submitting permit applications with the county, the project will go before the Navajo County Planning and Zoning Commission, Navajo County Board of Supervisors, and the Arizona Corporation Commission for public hearings. Notifications of future meetings or hearings will be posted to the project website at https://www.aes.com/west-camp-wind and may be mailed directly by the county. The public can also utilize the project hotline at **1-800-317-1152** to ask for more information about the project.

Sincerely,

Rob Gardner
Developer, Western Wind Development
AES
282 Century Place #2000
Louisville, CO 80027


Joseph City
377
West Camp Wind Farm
Project Area
Wind Turbine Corridor
Gen-tie Line
Proposed MET Tower
Existing MET Tower
Cholla Power Plant
Transmission Lines
Private Lands
State Lands
Bureau of Land Management
Tribal Lands
Navajo County, AZ
USGS 7.5' Quadrangle:
Chimney Canyon, AZ, 34110-G4
Dry Lake NW, AZ, 34110-F4
Dry Lake NE, AZ, 34110-F3
NAD 1983 UTM Zone 12N
1:175,000
N

Public Meeting Materials

AES: bringing clean energy to every Arizonian

Since 2010, AES has been delivering power from renewable sources to the state of Arizona. AES and Arizona are using the most advanced wind and solar generation technologies available.

266 MW

Operating clean energy resources (solar, solar + storage, wind, wind + storage)

4.7 GW

Clean energy projects in development

AES is committed to being a good neighbor in the communities we operate in by investing and supporting local organizations and programs. These include nonprofits, educational institutions, tribal communities, and local businesses to help ensure that the benefits of a clean energy future accrue to everyone.

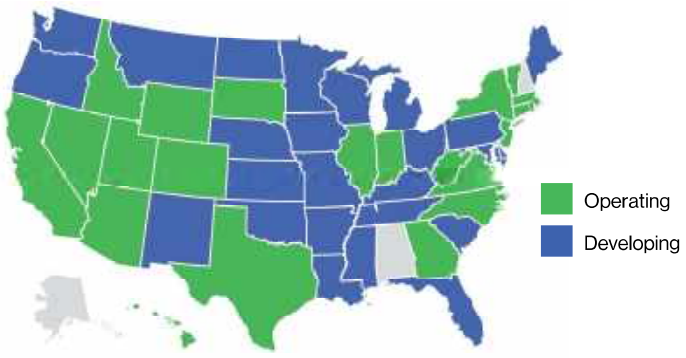
AES U.S. Clean Energy Portfolio

4.5 GW

Operating clean energy resources (solar, solar + storage, wind, wind + storage)

40 + GW

Clean energy projects in development



700+ Employees

400+ Renewable projects

21 States

Project overview

- Location: Navajo County, approximately 10 miles S of Joseph City, Arizona
  Property Info: “Hashknife Ranch” – approximately 53,000 acres consisting mostly of private land.
- Zoning: Navajo County Zone A General
- Planned Capacity: 500MW
- Number of Turbines: Up to 104
- Est. Operation Date: 2025
- Point of Interconnection: Cholla Substation, Navajo County

Community Impact

- Local Economy: $10+ million will be generated in local construction labor income and indirect spending.
- Property Tax Revenue: ~$15+ million in property tax revenue will be generated over the project lifetime, which can be utilized for essential services and programs.
- Job Creation: 500+ total construction jobs will be created during the ~1 year of peak construction with 20-30 permanent jobs over the project lifetime at full build out.
- Environmental Benefits: At full buildout, the project will offset the equivalent of 1.9 million metric tons of carbon dioxide per year, making the air cleaner and addressing climate change.
- Electric Grid Benefits: The addition of wind generation will diversify energy generation resources and reduce dependence on fossil fuel.

Agency coordination

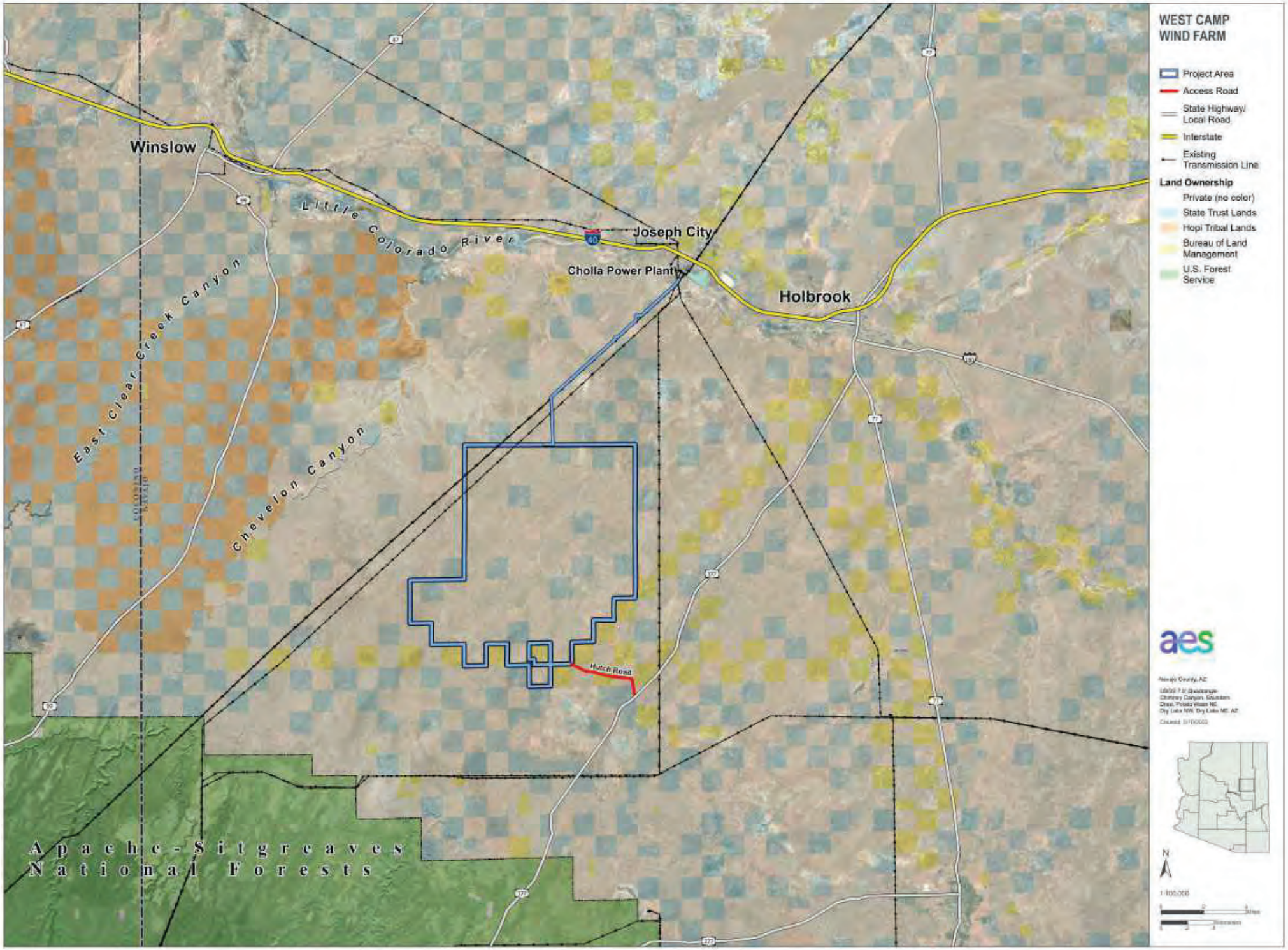
- → Federal: (no federal permitting/National Environmental Policy Act nexus)
  U.S. Fish and Wildlife Service Region 2
  Federal Aviation Administration
  U.S. Army Corps of Engineers
- → State: Arizona Game and Fish Department
  Arizona State Lands Department
  Arizona Corporation Commission
- → Local: Navajo County

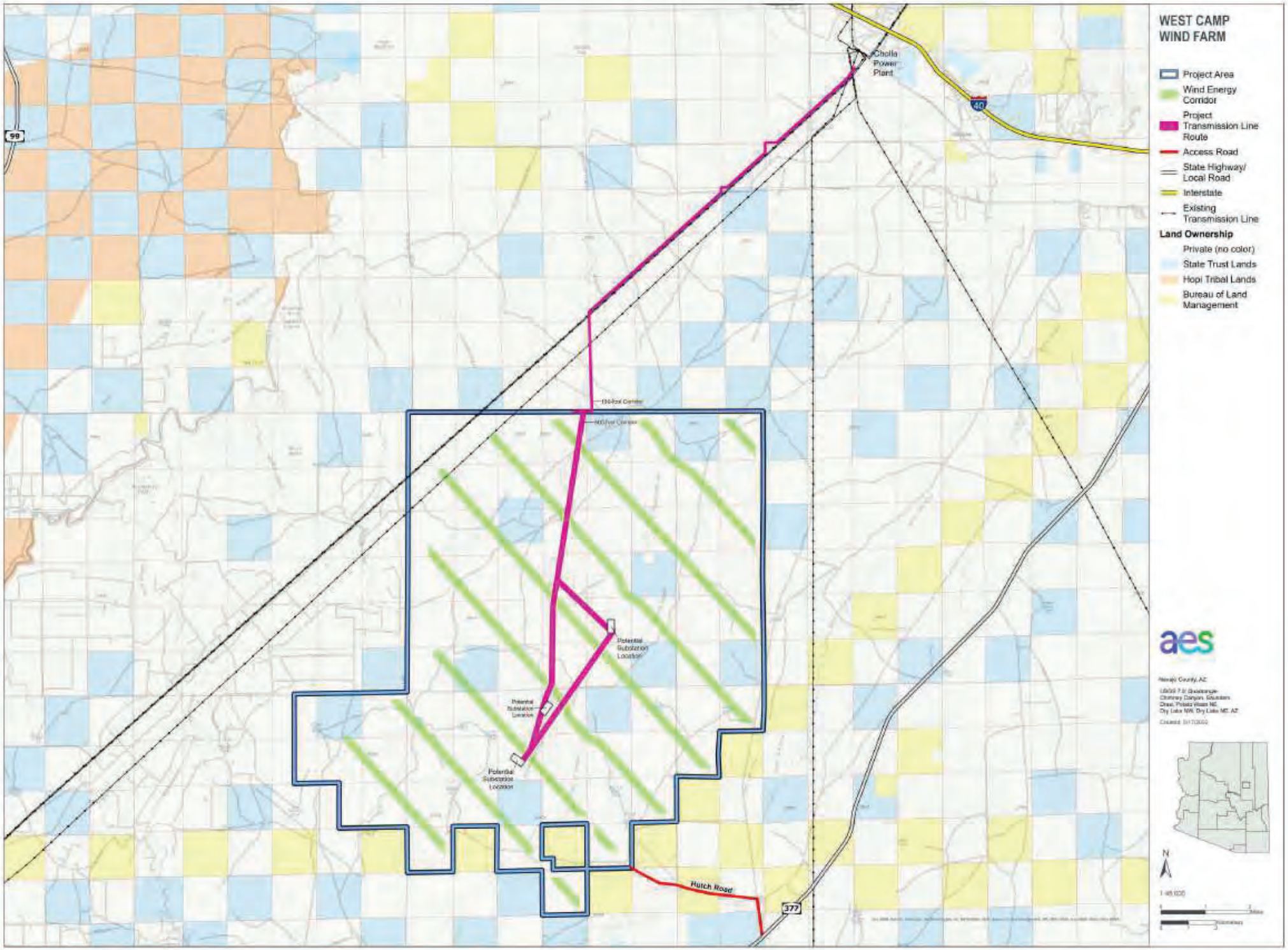
Voluntary Tribal Outreach

Letters sent to 8 potentially interested tribes

Environmental Studies
Microwave and Airspace: Third-party studies completed in mid 2021 / early 2019
Wildlife Site Characterization Report: Completed May 2022
Wildlife Survey Plan: Completed April 2022, consulting with AGFD and USFWS Region 2
Tier 3 Avian Wildlife Surveys: Commenced in October 2019, including avian/eagle use counts, raptor/eagle nest surveys, and bat acoustic monitoring
Wetlands/Jurisdictional Water Surveys: Fieldwork to begin in June/July 2022
Sound Study: In progress
Visual Simulations: Completed May 2022
Public Participation Plan: In progress with community meetings in May

Cultural Studies
Cultural Resource Surveys: Desktop research in progress

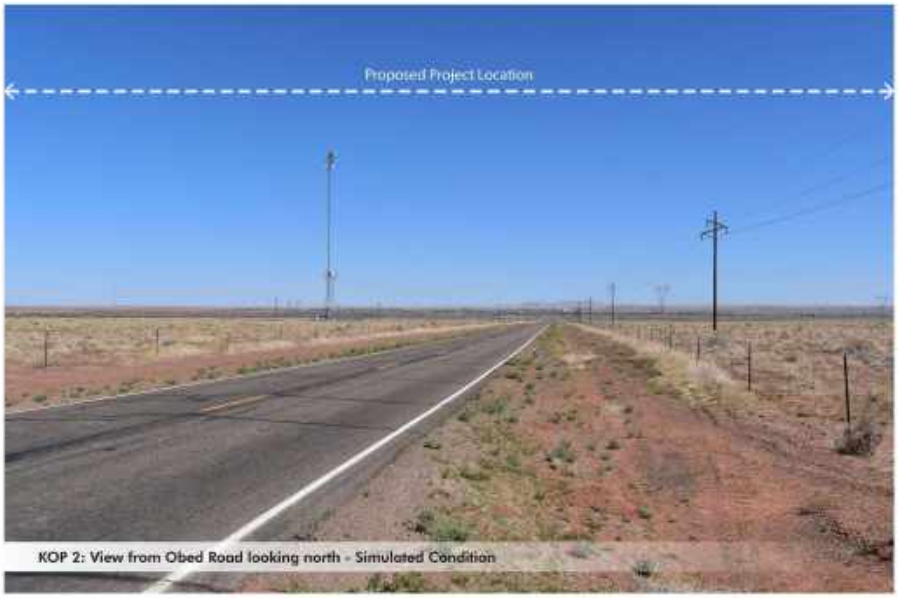

WEST CAMP
WIND FARM
Project Area
Access Road
State Highway/
Local Road
Interstate
Existing
Transmission Line
Land Ownership
Private (no color)
State Trust Lands
Hopi Tribal Lands
Bureau of Land
Management
U.S. Forest
Service
Winslow
Little Colorado River
Joseph City
Cholla Power Plant
Holbrook
East Clear Creek Canyon
Chevelon Canyon
Hutch Road
Apache-Sitgreaves
National Forests
aes
Navajo County, AZ
N


WEST CAMP
WIND FARM
Project Area
Wind Energy Corridor
Project Transmission Line Route
Access Road
State Highway/ Local Road
Interstate
Existing Transmission Line
Land Ownership
Private (no color)
State Trust Lands
Hopi Tribal Lands
Bureau of Land Management
Cholla Power Plant
Potential Substation Location
Potential Substation Location
Potential Substation Location
Hutch Road
99
40
377
aes

KOP 1: View from Interstate 40 and Frontage Road looking southwest - Existing Condition

KOP 1: View from Interstate 40 and Frontage Road looking southwest - Simulated Condition

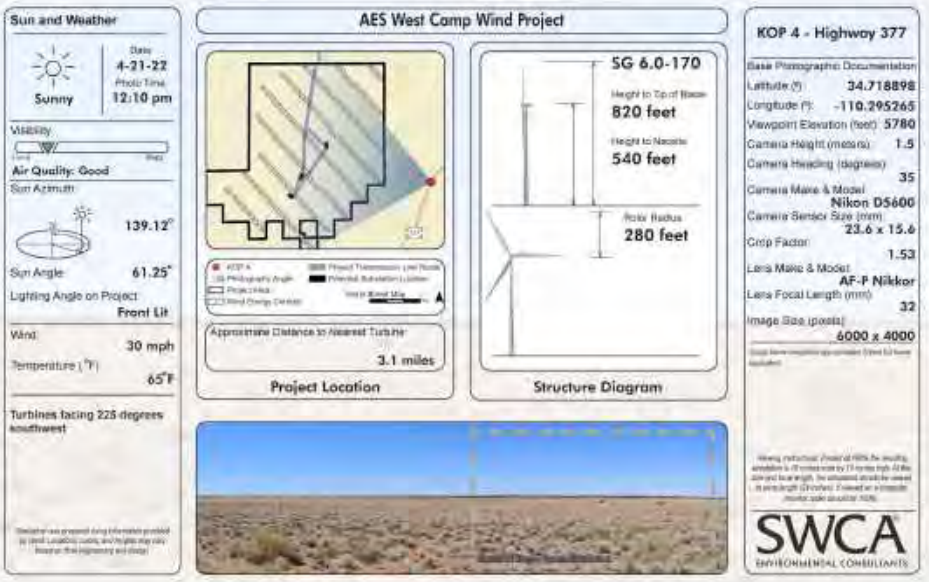

KOP 2: View from Obed Road looking north - Existing Condition



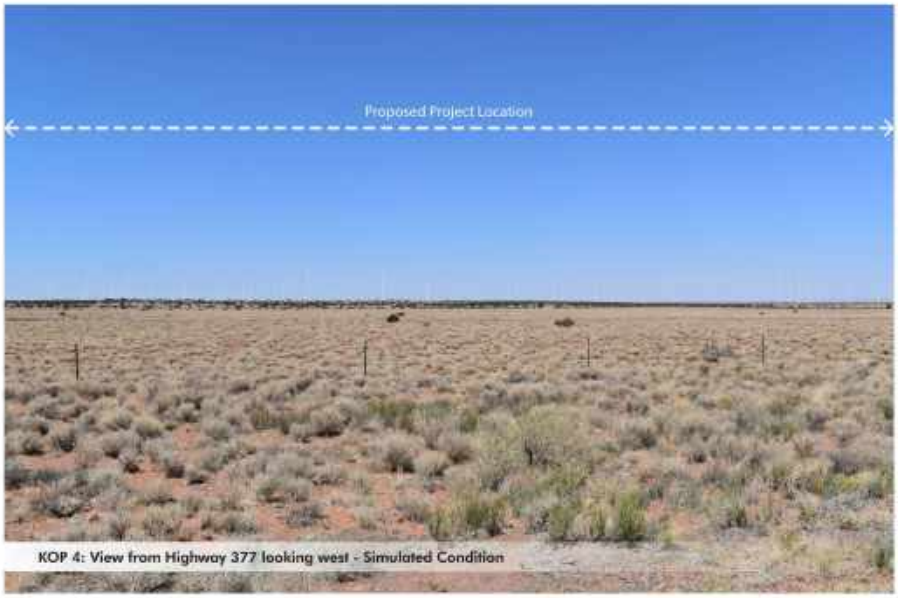
KOP 2: View from Obed Road looking north - Simulated Condition

KOP 3: View from Lx Ranch Road and Angel Light Lane looking southwest - Existing Condition

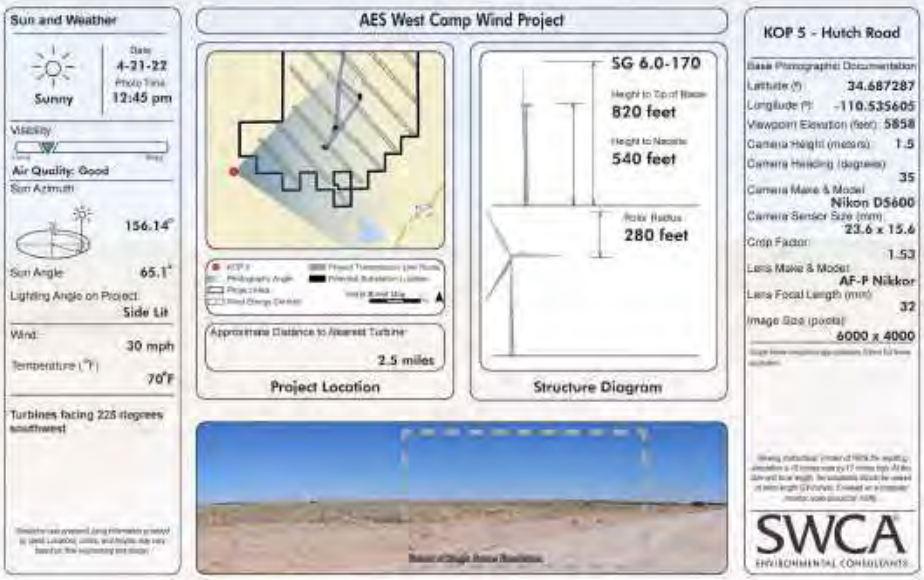
KOP 3: View from Lx Ranch Road and Angel Light Lane looking southwest - Simulated Condition



KOP 4: View from Highway 377 looking west - Existing Condition



KOP 4: View from Highway 377 looking west - Simulated Condition



KOP 5: View from Hutch Road looking northeast - Existing Condition

KOP 5: View from Hutch Road looking northeast - Simulated Condition

EXHIBIT J – ATTACHMENT J-2

Gen-Tie Project Public Notification Letter (July 6, 2022)

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July 6, 2022

West Camp Wind Farm, LLC
282 Century Place
Suite 2000
Louisville, CO 80027

Dear Neighbor,

West Camp Wind Farm, LLC (Applicant), an indirect subsidiary of The AES Corporation, is applying for a Certificate of Environmental Compatibility (CEC) from the Arizona Corporation Commission to construct and operate the West Camp Wind Gen-Tie Project. The Applicant is proposing to construction the West Camp Wind Farm (Wind Farm Site), a maximum 500-megawatt wind energy facility to be located almost entirely on private lands approximately 10 miles southwest of Joseph City in unincorporated Navajo County, Arizona. The Applicant submitted a Special Use Permit application to Navajo County for the Wind Farm in late June 2022. The Wind Farm Site will interconnect with the regional transmission grid via a generation-tie transmission line (Gen-Tie Line). The Gen-Tie Line is subject to a CEC from the Arizona Corporation Commission and the Applicant intends to submit a CEC application in August 2022.

As a landowner located within 1-mile of the proposed Gen-Tie Line, the Applicant is seeking your input on the proposed Gen-Tie Line. AES is evaluating several Gen-Tie Line options to interconnect the Wind Farm Site to the existing Arizona Public Service (APS) transmission system. The Gen-Tie Line will either interconnect at the Cholla Substation or interconnect via a line tap within the Wind Farm Site to either the APS 345-kV Preacher Canyon-Cholla transmission line or the APS 345-kV Cholla-Pinnacle Peak transmission line (refer to the attached figure). The on-site substations and potential on-site switchyard infrastructure will be sited within the Wind Farm Site in Sections 7, 26, and 34 of Township 16 North and Range 18 East and Section 9 of Township 15 North and Range 18 East. The Gen-Tie Line corridors within the Wind Farm are pending detailed electrical engineering and design. The Gen-Tie Line corridor to the Cholla Substation will be located within a 150-foot-wide easement as shown in the attached figure.

The Gen-Tie Line will be sited entirely on private lands and is co-located to the greatest extent feasible with existing electrical infrastructure. Visual simulations, cultural resource investigations, natural resource and wildlife studies, and other siting evaluations are underway, in addition to ongoing agency consultation, to identify and mitigate impacts to applicable resources.

Project Website

A project website has been developed to share information on the Wind Farm and the Gen-Tie Line and provide on-going project updates throughout the project development process. Project information available on the website includes a description of the Wind Farm and Gen-Tie Line, context map and site plan, visual simulations, and frequently asked questions.

https://www.aes.com/west-camp-wind

Submit Comments

To submit comments, please go to the project website or mail comments to the address below:

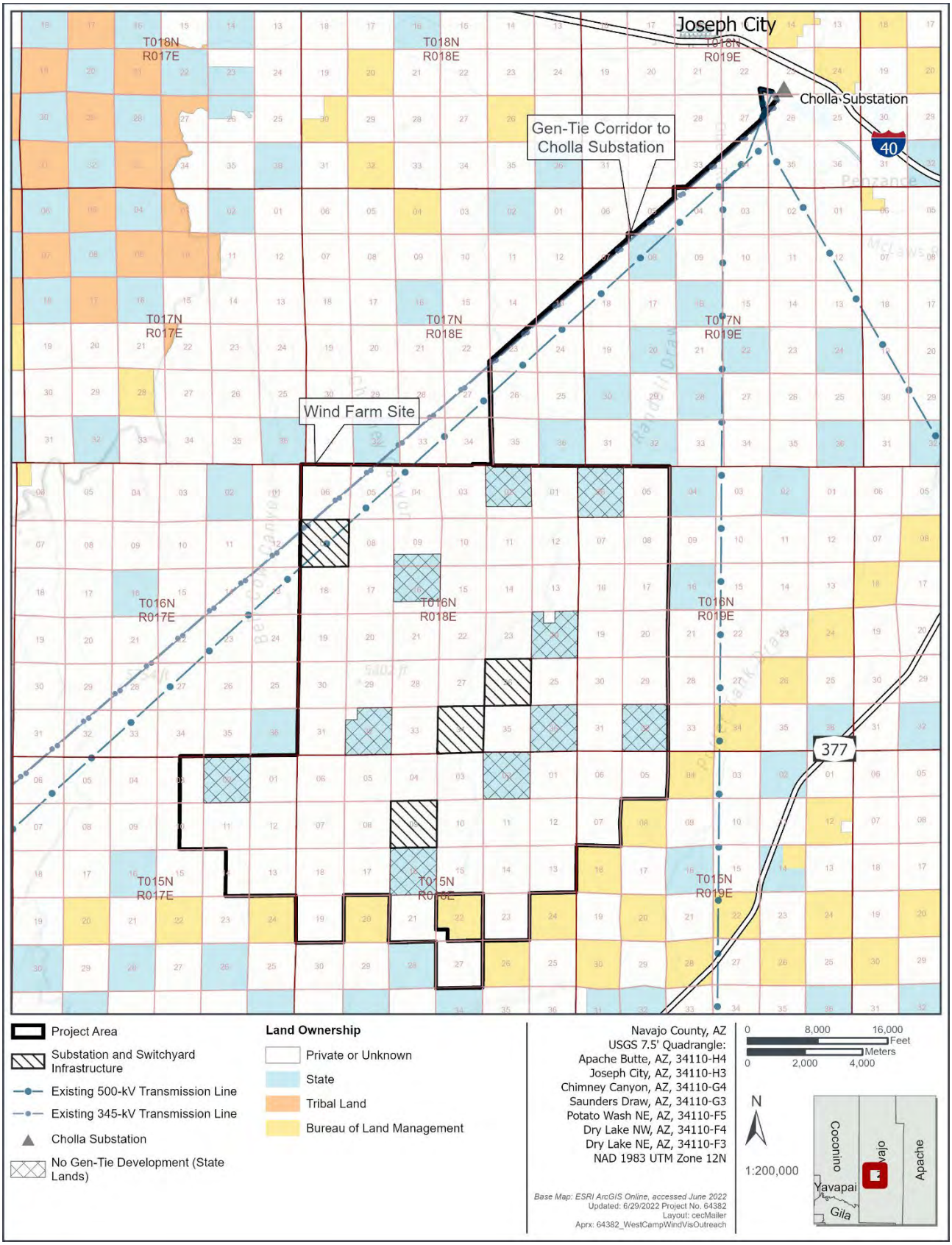
West Camp Wind Farm
c/o SWCA
1645 S. Plaza Way
Flagstaff, Arizona 86001

In order to address your comments in the CEC application, please submit comments by July 25, 2022. The CEC includes additional comment opportunities during the hearing process.

After submitting a permit application, the Gen-Tie Line will go before the Arizona Corporation Commission for public hearings. Notifications of future meetings or hearings will be posted to the project website at https://www.aes.com/west-camp-wind and or may be mailed directly. The public can also call the project hotline at **1-800-317-1152** to ask for more information about the project.

Sincerely,

Rob Gardner
Manager, Western Wind Development
The AES Corporation
282 Century Place #2000
Louisville, CO 80027


Joseph City
Cholla Substation
Gen-Tie Corridor to Cholla Substation
Wind Farm Site
T018N R017E
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40
377
Project Area
Substation and Switchyard Infrastructure
Existing 500-kV Transmission Line
Existing 345-kV Transmission Line
Cholla Substation
No Gen-Tie Development (State Lands)
Land Ownership
Private or Unknown
State
Tribal Land
Bureau of Land Management
Navajo County, AZ
USGS 7.5' Quadrangle:
Apache Butte, AZ, 34110-H4
Joseph City, AZ, 34110-H3
Chimney Canyon, AZ, 34110-G4
Saunders Draw, AZ, 34110-G3
Potato Wash NE, AZ, 34110-F5
Dry Lake NW, AZ, 34110-F4
Dry Lake NE, AZ, 34110-F3
NAD 1983 UTM Zone 12N
0 8,000 16,000 Feet
0 2,000 4,000 Meters
N
1:200,000
Coconino
Navajo
Apache
Yavapai
Gila
Base Map: ESRI ArcGIS Online, accessed June 2022
Updated: 6/29/2022 Project No. 64382
Layout: cecMailer
Aprx: 64382_WestCampWindVisOutreach

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EXHIBIT J – ATTACHMENT J-3

Comments and Responses

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West Camp Wind Farm Project - Public Comment Tracker (current as of 8/16)

Entity	Date Received	Response Type	Content	AES Response
SHPO - Caroline Klebacha cklebacha@azstateparks.gov	5/10/2022	Email	Confirmed cultural resource surveys are underway, wants to see them when finished	
BLM - Ronald Peru rperu@blm.gov	5/18/2022	Email	Falls under boundary of Safford Field Office - said if we are accessing from 377 we need to contact them	5/31 - Robert Gardner responded saying we do not anticipate any improvements on BLM land and we will consult them in the future. 6/1 - Ron Peru responded saying AES would need a SF-299 right-of-way evenutally, even if no improvements are made. 6/14 - Robert Gardner responded saying he understood and thank us for the info.
Nearby Resident - Kevin Paquette Ibuild4u2@comcast.net (617)875-5102	5/13/2022 7/12/2022	Phone call	Asked to be sent a map that can be read better	5/19 - Robert Gardner sent back a map and outreach letter. 7/11 - Mr. Paquette rasked how close the project was to his property; Robert Gardner provided that information, and Mr. Paquette responded that he was not worried and that he supports wind farms in general; RG to send map.
AGFD - Tiffany Sprague tsprague@azgfd.gov	5/17/2022	Phone call	Asked if open meeting would have virtual option	5/18 - Responded in person and told Ms. Sprague that there is no virtual option but that she is more than welcome to attend in person.
Nearby Resident - Dan Arcilese 602-758-3203	6/22/2022	Phone call	Asked about turbine siting on both sides of hutch rd, setbacks from existing residences, access to ranch during operation	6/23 - Robert Gardner spoke with Mr. Arcilese and talked to him about the project; he did not express any concern about the development, seemed mildly supportive.
Public Comment - Murray murray@theprocessgroup.com (San Jose, CA)	7/10/2022	Website forum	How many song birds and raptors and scheduled to die over the life of the project?	7/13 - Robert Gardner sent email responding with permitting information/compliance steps, as well as best available science information for wind projects and avian impacts.
Public Comment - Allen Platt allen@platt-family.net (Los Angeles, CA [Space X])	7/13/2022	Website forum	"Not interested in seeing this project move forward, This will be an eyesore to those of us that have spent considerable time and money to move away from this type of infrastructure and invest in the ranchland at Chevelon Canyon Ranch. We built our home to face north for the perfect view of the distant plateaus and open range, now our view will be of wind turbines across the horizon."	7/15 - Robert Gardner sent an email with visual simulations and included information about the Aircraft Detection Lighting System. 7/15 - Allen Platt responded and with the information Robert Gardner provided; Platt's previous comments were nullified.

Entity	Date Received	Response Type	Content	AES Response
Public Comment - Rebecca Newton sinatra_33@yahoo.com (Phoenix, AZ)	7/13/2022	Website forum	"I'd like to see a simulation phots of what these turbines will look like on my lot on Apathascan Road. Can you share those on the site? I'm concerned that this will impede the view, which is the reason behind me buying my land in the first place. This is overall disappointing."	7/15 - Robert Gardner sent an email asking for parcel number so he can provide nearest visual simulation.
Public Comment - Linda House lindasabode@gmail.com	7/14/2022	Website forum	"Awesome, solar and wind are the best. I am very conservative. I have lived the last 2 decades off grid on solar, and another decade off grid with no electric of any kind. I am so glad to see that the anti green energy people are not blocking this project. We have known since the 70's that oil and coal were running out yet in 50 years have done little to stop the consumption. And no I am not a Democrat nor are any of the other many neighbors on solar, off grid."	7/15 -Robert Gardner sent email thanking sender for comments and support.
Public Comment - Patrick Hansen pat.hansen2021@gmail.com	8/11/2022	Website forum	"Why is the next public meeting not listed on the letter you sent me? Why cant I find the location of the next public meeting on the website you provided? Let the record reflect these two questions and note and record my OBJECTION AGAINST the West Camp Wind Gen-Tie Project constructing or erecting any structures and any future alterations or kinds of Wind Farming operations within 10 miles of my property in Navajo County, Arizona."	8/12 - Robert Gardner responded that hearing dates had not been scheduled when the letter was sent, but new hearing dates can be found on the project website.

Entity	Date Received	Response Type	Content	AES Response
Public Comment - Patrick Hansen P.O. Box 1131 Heber, AZ 85928	8/16/2022	Hard Copy Mail	"For the Record: :I object to this project moving forward and demand that this company cease and desist. I do not consent to the construction of any Wind Turbine near my private property (Within 10miles) of my home." Why is the next public meeting not listed on the letter you sent me? Why can't I find the location of the next public meeting on the website you provided? Let the record reflect these two questions and note for record my OBJECTION AGAINST and this NOTICE to CEASE & DESIST the West Camp Wind Gen-Tie Project constructing and/or erecting any structures on any future alterations or kinds of Wind Farming operations/construction within 10 miles of my property in Navajo County, Arizona."	See response above to website forum comment.

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