KORSAIL ENERGY

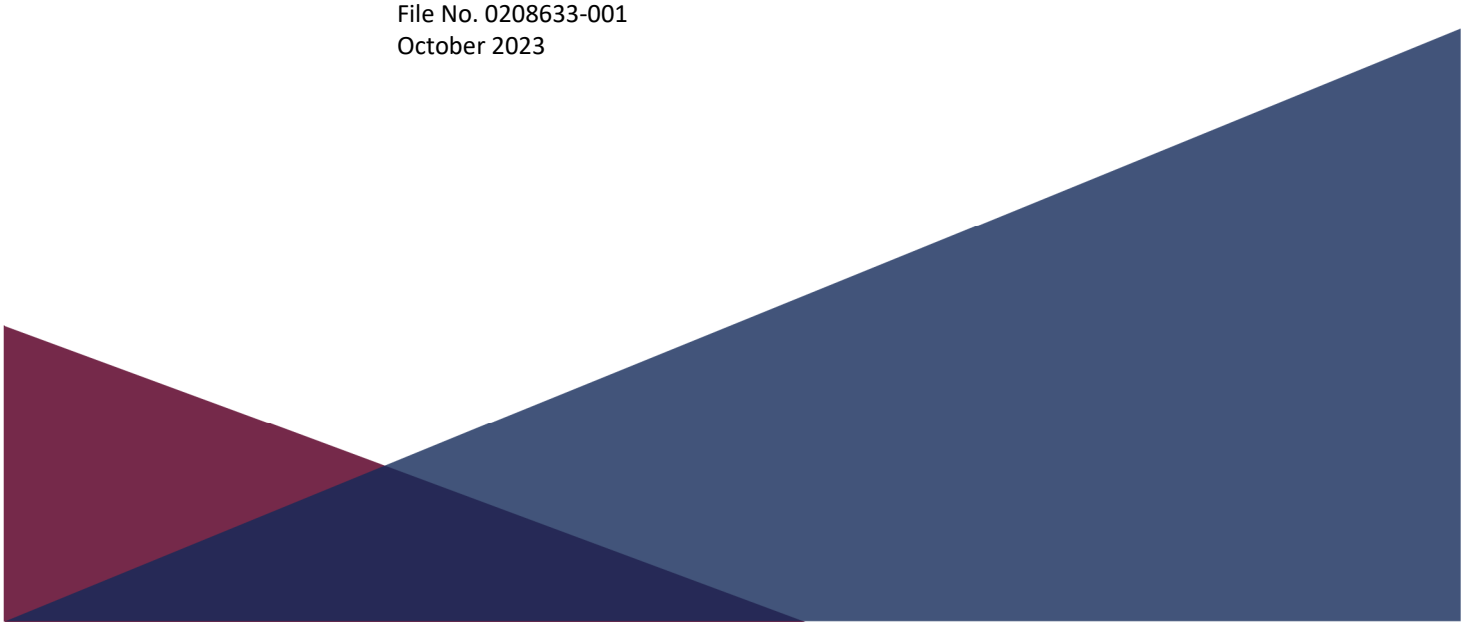
SPECIAL USE PERMIT APPLICATION

HERBIE SOLAR PROJECT
COCHISE COUNTY, ARIZONA

by
Haley & Aldrich, Inc.

for
Herbie Solar LLC

File No. 0208633-001
October 2023



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1. Introduction

This application for a Special Use Permit is filed on behalf of Herbie Solar LLC (Herbie). Herbie is managed by Korsail Energy (Korsail), a developer of renewable energy projects that has an ownership interest in two gigawatts (2GW) of clean generation across the United States. Herbie is proposing to develop, construct and operate the Herbie Solar Project, an 80MWac, 120MWdc photovoltaic (PV) solar generating facility coupled with a 20MW/80MWh Battery Energy Storage System (the Project) on approximately 530 acres near the City of Willcox, Cochise County, Arizona (Project Area). See Figure 1. The proposed Project Area is zoned for rural use and Herbie has a 50-year lease with the landowners of the parcels that comprise the Project Area.

Herbie is submitting this Special Use Permit application in compliance with the requirements set forth under the Cochise County Zoning Ordinance, specifically Article 18 (§ 1824.03) governing site development standards for Solar Energy Power Plants. A copy of the Special Use Permit application form and signed authorization from the landowner to apply for a Special Use permit are provided in Appendix A.

2. Project Description

The proposed Project is an 80MWac, 120MWdc photovoltaic solar energy generating facility and 20MW/80MWh battery energy storage system (BESS) capable of providing clean, renewable energy. The proposed Project Area is depicted on the Site Plan included in Appendix B. The Project Area currently consists of rangeland with relatively flat topography and a County maintained road, South Blue Sky Road, that runs north-to-south near the center of the Project Area. Moonlight Road is located along the northern border of the Project Area. The City of Willcox is located approximately 1.0 mile west of the Project Area.

The Project will include 220,164 photovoltaic modules (PVs). PV solar modules will be used to convert sunlight into direct current (DC) electricity which will then be converted to alternating current (AC) electricity using inverters that will be placed throughout the Project Area. At the inverter locations, integral low voltage transformers will increase the voltage before reaching the medium voltage collection cabling. Electrical collection lines (either below ground or in trays below panel height) will deliver the generated electricity to a substation serving the Project, where a generator transformer will increase (or step up) the AC electricity to match the existing electrical system. The Project will also include a battery energy storage system (BESS) that will store energy generated by the PV solar modules and supply stored energy to the grid when demand is high.

The Project will integrate with surrounding land uses and the general character of the area. The Project Area is located immediately adjacent to multiple parcels of state trust land owned by the Arizona State Land Department (ASLD). From aerial imagery, the ASLD land appears to be largely undeveloped herbaceous and shrub/scrub land, that transitions to rolling hills and mountainous woodland northeast of the Project Area, developed land in the City of Willcox west of the Project Area, and agricultural land southeast of the Project Area. The Project Area is also located approximately 10 miles west of Dos Cabezas Mountains Wilderness Area. The adjacent ASLD lands do not seem to be designated as recreational or scenic areas. Development of the Project is not expected to impact any current or future land uses on adjacent properties. No residences have been identified in the vicinity of the Project Area that could be negatively impacted by visual impacts during construction or operation of the Project.

In efforts to engage the Cochise County community, the Herbie team instituted multiple outreach efforts, including mailing notifications of the proposed Project, circulating newspaper ads, establishing a project website, holding an open house, and providing Project informational flyers to open house attendees. Please see Appendix C for the Citizen Review Report which includes copies of the mailings, newspaper ads, and informational flyers.

3. Existing Conditions

The Project Area consists of undeveloped range land. The access road on site is South Blue Sky Road, a county-maintained road that provides access from State Route 186 south of the project area. The Arizona Department of Water Resources (ADWR) Groundwater Site Inventory indicates there is one field-verified private well located directly south of Moonlight Road, which runs along the northern edge of the project, and east of Blue Sky Road within the Project Area; the well is used with a water pump for cattle. During a site visit in August 2023, a small wind turbine was observed directly south of Moonlight Road within the Project Area. It is assumed this turbine operates the water pump for the groundwater well. The Project will not require water use or discharge of pollutants to groundwater; furthermore, a 20-foot setback around the well will be maintained. Therefore, no associated impacts or permit approvals apply. The Project will implement spill prevention practices during both construction and operation to reduce the likelihood of any potential impacts to the underlying groundwater.

No known sewage treatment systems are located within the Project Area. No buildings or impervious structures are present within the Project Area. The only structure observed in the Project Area was the small wind turbine to operate the water pump.

3.1 WETLAND AND STREAM FEATURES

A wetland and stream delineation was completed on-site in August 2023. Siting of Project components has avoided impacts to delineated resources to the extent practicable. If wetland and stream permits are necessary, Herbie will obtain permits and certifications from the U.S. Army Corps of Engineers and the Arizona Department of Environmental Quality. Herbie will provide notice to Arizona Department of Environmental Quality of its intent to be covered by the Arizona Pollutant Discharge Elimination System (AZPDES) General Construction Activity Permit regarding stormwater for construction activities disturbing more than 1 acre.

3.2 THREATENED AND ENDANGERED SPECIES

On behalf of Herbie, Haley & Aldrich, Inc. (Haley & Aldrich) requested an Information for Planning and Consultation (IPaC) review with the U.S. Fish and Wildlife Service (USFWS) regarding federally listed species and Arizona Game and Fish Department (AZGFD) data (accessed through their Online Environmental Review Tool) for state listed species. See Appendix D for copies of the USFWS and AZGFD consultation.

The USFWS identified 11 listed wildlife species as having the potential to occur within the Project Area, which include:

- Jaguar (*Panthera onca*)
- Mexican wolf (*Canis lupus baileyi*)
- Mexican spotted owl (*Strix occidentalis lucida*)
- Yellow-billed cuckoo (*Coccyzus americanus*)
- Northern aplomado falcon (*Falco femoralis septentrionalis*)
- Golden eagle (*Aquila chrysaetos*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Chiricahua leopard frog (*Rana chiricahuensis*)

- Monarch butterfly (*Danaus plexippus*)
- Arizona eryngo (*Eryngium sparganophyllum*)
- Wright's marsh thistle (*Cirsium wrightii*)

The IPAC report indicates that no federal wilderness areas, wildlife refuges, or designated critical habitat area present within the Project Area.

Haley & Aldrich reviewed the AZGFD Online Environmental Review Tool to identify state Species of Greatest Conservation Need (SGCN) that may occur within the Project site. The SGCN list scores species based on their vulnerability. Per the 2022 Arizona Wildlife Conservation Strategy, species in Tier 1 were scored the most vulnerable, with a score of "1," and were identified in at least one of the following categories:

- Federally listed as endangered or threatened or is a candidate to be listed;
- Is specifically covered under a conservation agreement or conservation agreement with assurances;
- Recently removed from the Endangered Species Act (ESA) list and currently requires post-delisting monitoring; or
- Closed season species (i.e., no hunting) as identified by AZGFD.

Tier 2 species are also identified as the most vulnerable; however, they do not fall into any of the categories identified above. The AZGFD data indicates one SGCN Tier 1 species and ten SGCN Tier 2 species are predicted to occur in the vicinity of the Project Area, including:

- Horned lark (*Eremophila alpestris* – Tier 2)
- Black-throated sparrow (*Amphispiza bilineata* – Tier 2)
- Western burrowing owl (*Athene cunicularia hypugaea* – Tier 2)
- Verdin (*Auriparus flaviceps* – Tier 2)
- Swainson's hawk (*Buteo swainsoni* – Tier 2)
- Lark bunting (*Calamospiza melanocorys* – Tier 2)
- Scaled quail (*Callipepla squamata* – Tier 2)
- Cactus wren (*Campylorhynchus brunneicapillus* – Tier 2)
- Pyrrhuloxia (*Cardinalis sinuatus* – Tier 2)
- Snowy plover (*Charadrius nivosus nivosus* – Tier 2)
- Killdeer (*Charadrius vociferus* – Tier 2)
- Chihuahuan raven (*Corvus cryptoleucus* - Tier 2)
- Bullock's oriole (*Icterus bullockii* – Tier 2)
- Loggerhead shrike (*Lanius ludovicianus* – Tier 2)
- Canyon towhee (*Melozone fusca* – Tier 2)
- Harris's hawk (*Parabuteo unicinctus* – Tier 2)
- Bendire's thrasher (*Toxostoma bendirei* – Tier 2)
- Brazilian free-tailed bat (*Tadarida brasiliensis* – Tier 2)
- Chiricahua leopard frog (*Rana chiricahuensis* – Tier 1)
- Sonoran spotted whiptail (*Aspidoscelis sonorae* – Tier 2)
- Gila monster (*Heloderma suspectum* – Tier 1)
- Hooded nightsnake (*Hypsiglena sp. nov.*– Tier 2)
- Slevin's bunchgrass lizard (*Sceloporus slevini* – Tier 2)

No direct impacts to the state or federal listed species discussed above are anticipated, due to either lack of suitable habitat, or by means of avoidance of habitat and implementing BMPs, including time-of-year restrictions for clearing, if applicable. On September 25, 2023, the Herbie Project Team consulted with the AZGFD regarding potential presence of these species within the Project Area. Mitigation measures to avoid impacts will be incorporated into design and include spacing the PV module rows 24 feet apart to prevent the "lake effect," an area of reflective glare that could be mistaken as a body of water by birds in flight. The attached Site Plan (Appendix B) is a preliminary design; the 24-foot spacing between module rows is currently being incorporated and Herbie will continue working with AZGFD to ensure this meets their guidelines. Herbie will continue to follow AZGFD guidance for fencing best practices. AZGFD recommends security fencing include intermittent gaps between the ground and base of the fence to allow passage of small mammals (e.g., jack rabbits, antelope, wolves, and coyotes, etc.).

Please see Appendix D for USFWS and AZGFD consultation correspondence, including a response letter from AZGFD, dated October 18, 2023.

3.3 CULTURAL RESOURCES

On behalf of Herbie, Desert Archaeology, Inc. prepared a Cultural Resource Records Review (Phase IA cultural resources desktop study) in August 2023, which included review of the National Register of Historic Places (NRHP), the Arizona Register of Historic Places (ARHP), and other previous cultural resource surveys conducted within vicinity of the Project Area. Findings indicate one previously recorded cultural resource (artifact scatter) is located within the Project Area and four are located adjacent to it, all of which are classified as artifact scatter. The cultural resource indicated within the Project Area (Site No. AZ CC: 13:63[ASM]) is of unknown NRHP eligibility status. The current Project layout (see Appendix B) does not cross into the location of the cultural resource site (located near the southern extent of the parcel), thereby avoiding any impacts to the resource. The San Carlos Apache (45 miles north) and Tohono O'odham Nation (70 miles west) American Indian Reservations are located within the surrounding general region of the Project Area, though it should be noted that historic tribal lands may have shifted over time. Additional cultural resource investigations may be undertaken as necessary to support any federal permitting that may be necessary for the Project.

4. Project Structures and Proposed Conditions

Herbie provides a Site Plan in Appendix B, which depicts the features laid out below. The proposed Project is anticipated to be constructed on approximately 530 acres. Herbie is currently in the middle of developing and permitting the Project but anticipates that after all local, state and federal approvals are obtained that construction will commence in June 2026 and be completed and ready for service in July 2027.

The Project Area will be secured by a perimeter fence that will meet Cochise County, state, and federal requirements. Project components within the fence will include PV solar modules (groups of panels) mounted on single axis trackers that will allow the solar panels to follow the sun throughout the day. The PV solar modules will be supported by racking systems and oriented in rows running from north to south. With this orientation, the panels will face east toward the rising sun in the morning, will be parallel to the ground at mid-day, and will rotate west to the setting sun in the afternoon. A small motor at the pivot point slowly moves the panels to track with the position of the sun throughout the day. This approach optimizes the angle of the panels relative to the sun and maximizes the production of electricity from the Project.

The modules will be connected using DC cables that can be buried underground. The DC cables gather at the end of the racking systems to combiner boxes which are connected to cables routing to an inverter. From the inverters, AC collection lines will extend toward the Project substation to allow generated electricity from all the modules to interconnect at that point. The AC collection system is anticipated to be underground.

A total of 22 inverters will be installed throughout the Project Area to convert the DC power from the DC collection system to AC power. The equipment will be placed on a concrete slab or pier foundation, which may be precast and assembled off-site. The panels and foundation will be constructed to be within accepted professional standards.

The Project Area will be accessed from State Route 186 and Blue Sky Road from the south. An internal network of gravel roads will be constructed that will allow access to the equipment located throughout the Project Area. Design of the roads will allow for safe passage of Project vehicles and emergency vehicles. While all equipment will be accessible within the Project, not all panels will necessarily have direct road access. This minimizes the amount of ground disturbance associated with roads while still providing effective, efficient, and safe access. The Project will also include a building for operations and maintenance workers and equipment with a gravel access road and small gravel parking area for 2 to 3 vehicles. The operations and maintenance building will be approximately 1,750 square feet and located in the west-central portion of the Project Area. There will be a leach field associated with the operations and maintenance building, approximately 1,000 square feet, located just south of the building.

During construction, the Project will include temporary laydown yards, construction management trailers, and stormwater management features. The laydown yards will include parking areas for construction workers in addition to areas for receiving shipments of posts and modules. After construction, the trailers will be removed, and the laydown yards will be returned to vegetated conditions. Some work areas will overlap with each other. As new areas are prepared for panel installation, equipment will be stored temporarily in those areas and moved ahead as the Project construction progresses. The intent is to

reduce the amount of dedicated temporary laydown space and multiple deliveries throughout the Project Area.

The Project substation will be located in the northeastern portion of the Project Area and will be surrounded by a perimeter fence that conforms to required security standards.

Operational sounds from the Project are expected to be primarily associated with the inverters, which will be roughly equivalent to the sound of a refrigerator. Construction noise will vary over time and will include relatively loud activities for short periods, primarily during the initial post embedment period. Noise associated with site visits and maintenance activities including individual operator vehicles and mowing will be negligible as they are similar to the existing ambient noise resulting from the surrounding agricultural activities.

Access to the Project will be controlled in accordance with applicable guidelines of the North American Electric Reliability Corporation, National Fire Protection Association, the National Electric Safety Code, and the Occupational Safety and Health Administration for the Project. A locked access gate will be provided at the entrance to the Project. Appropriate signage will be installed for the Project as needed, in locations visible to the public to warn potential trespassers, including areas where electrical equipment could pose particular hazards.

The land below the solar arrays will be planted with a low-growing seed mix of native grasses and other low-maintenance varieties of vegetation to promote precipitation infiltration and reduce water run-off and soil erosion. Vegetation management will primarily be done with periodic mowing and trimming. Little or no chemical vegetation control is planned once the site is stabilized.

The Project will maintain the pre-existing drainage patterns. Minor grading is anticipated to install the proposed substation and access roads. The solar panels are anticipated to be installed on the existing grade.

5. Other Agency Consultations

5.1 ARIZONA DEPARTMENT OF TRANSPORTATION

On August 23, 2023, the Herbie Project team spoke with the Southeast District of the Arizona Department of Transportation (ADOT).

It was determined that the Herbie Solar Project would only need to apply for a permit from ADOT if they wanted to use oversize haul trucks to the Project site, require a new egress off of State Route 186 or widen the turning radius at the Blue Sky Road/ State Route 186 intersection. Currently, the Herbie Project team does not anticipate the need for any of these measures to construct and operate the Project. ADOT only mentioned the need for an improved apron on the Blue Sky Road egress at the State Route 186 intersection. The Project team agreed to maintain contact and coordinate with ADOT at time near the start date of Project construction.

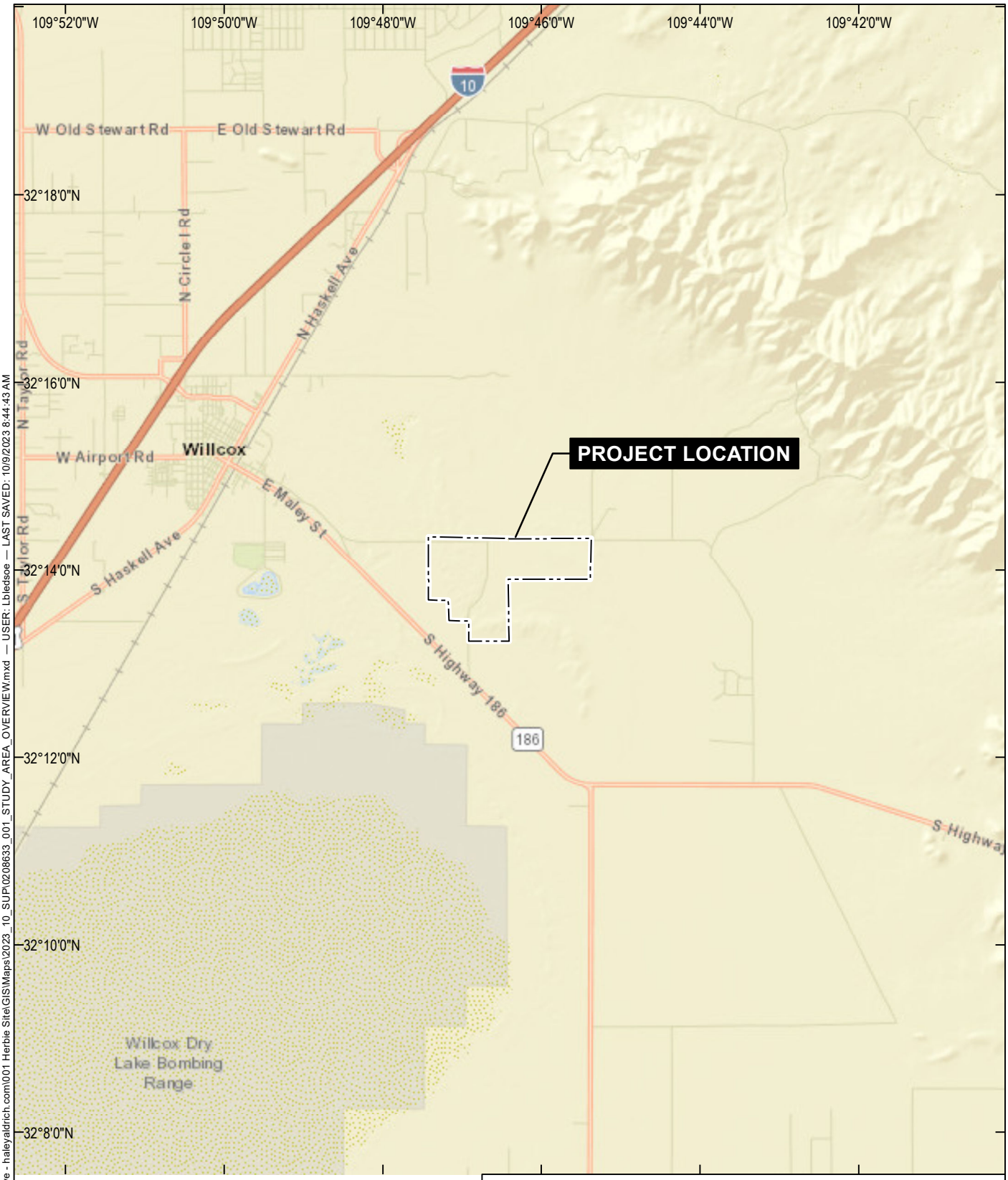
5.2 WILLCOX DEPARTMENTOF PUBLIC SAFETY

On July 21, 2023, the Herbie Team spoke with Dale Hadfield of the Willcox Department of Public Safety regarding the proposed Project. The Herbie project team discussed project access, site visits, and fire response training sessions specific to the BESS technology. The Herbie Team will continue to work with the Willcox Department of Public Safety as the project progresses. Additionally, the Herbie Team is working with ESRG (Energy Safety Response Group) to create an Emergency Response Plan (ERP) in accordance with local code requirements which will include a site familiarization walkthrough and site-specific ESS training for the local fire service. The ERP will be completed prior to construction.

6. Decommissioning Plan

Cochise County Code requires a Decommissioning Plan as part of the Special Use permit package. This decommissioning plan details provisions for facility deconstruction and site restoration, to satisfy the specific guidelines set forth in the Herbie Solar Project Special Use permit. This decommissioning plan shall take effect upon facility abandonment, discontinuation of operation, or expiration of the Use permit as defined by Cochise County Code. The Solar Facility will have a maturity date of twenty (20) years but carries an expected useful lifetime of more than 30 years. Please see Appendix E for the Decommissioning Plan.

Figures



MAP SOURCE: ESRI
SITE COORDINATES: 109°46'40.9"W, 32°14'0.4"N

HALEY ALDRICH

HERBIE SOLAR PROJECT
COCHISE COUNTY, ARIZONA

PROJECT LOCATION

APPROXIMATE SCALE: 1 IN = 2 MI
OCTOBER 2023

FIGURE 1

GIS FILE PATH: C:\Users\lbledsoe\OneDrive - haleyaldrich.com\001 Herbie Site\GIS\Maps\2023_10_SUP\0208633_001_STUDY_AREA_OVERVIEW.mxd — USER: Lbledsoe — LAST SAVED: 10/9/2023 8:44:43 AM

APPENDIX A
Special Use Permit Application Form and Landowner Authorization for Special Use Application

Cochise County
Development Services
Planning Division
Public Programs...Personal Service
www.cochise.az.gov

APPLICATION FOR A SPECIAL USE

Applicant's Name: Herbie Solar LLC

Name of All Property Owner(s): J. Kathryn Klump and Karry Keith Klump, Stephen A. Klump and Shaye E. Klump, Phillip A. Klump and Shannon Klump

Applicant Mailing Address:

1415 Park Avenue West, Denver, CO 80205

Street # Town State Zip code

Subject Property Address (if different than mailing address):

32.233004420359784, -109.78541355077947 S Blue Sky Road, Willcox, AZ 85643

Street # Town State Zip code

Email Address: projects@korsail.com

Phone Number: 720-310-8834

Tax Parcel Number: 20316067, 20316063, 20316064, 20316061, 20316005, 20316059, 20316068

Current Zoning Designation: RU-4

Comprehensive Plan Land Use Category/Growth Area: Partially within Growth Area B, remaining in unincorporated area

Comprehensive Plan Land Use Designation: Rural (R)

Area Plan Designation (if applicable):

Size of Property (in acreage or square feet): 2,284.3 acres

How many acres will be cleared and developed? 530 acres, will require minimal clearance and grading

Describe your relationship to this application. (Select one)

- ☐ I am the property owner
- ☑ I am an authorized agent for the property owner

Bisbee Office
1415 Melody Lane, Building F
Bisbee, Arizona 85603
520-432-9300
520-432-9278 fax
planningandzoning@cochise.az.gov

If the applicant is not the property owner, please attach a notarized letter of authorization to this application.

The Purpose of a Special Use

Special Uses include uses or activities with a greater potential for impacts on neighboring properties than the permitted uses in a Zoning District. Examples of Special Uses are manufacturing, RV Parks, guest ranches, hospitals and schools. These more intense uses must be carefully reviewed to decide if they could make good neighbors to the existing uses. For this reason, a Special Use Permit requires a public hearing and approval by the Planning and Zoning Commission before it is allowed.

What is the Process?

1. Pre-application meeting with County planning staff.
2. Citizen Review Process – the applicant must send notice to all property owners within a radius of no less than 300 feet of the subject parcel(s), as shown on the most recent available records of the last property tax assessment. The County Zoning Inspector may expand the mailed notification area to greater than a 300-foot radius at time of application acceptance if there are compatibility concerns associated with the request.
3. Application Submittal
4. Technical review by relevant internal staff and external agencies
5. Public Hearing – Planning and Zoning Commission (Approval/Denial)

Appeals

The Commission action can be appealed to the Board of Supervisors by anyone who disagrees with the outcome. Appeals must be filed within fifteen (15) calendar days of the Commission action.
The applications are available online "Appeal: Board of Supervisors."

Required Submittals

1. This application
2. Citizen Review Report
3. Site plan -drawn to scale showing the existing and proposed District boundaries and an accurate legal description of the area being petitioned for amendment. See "concept plan instructions for special uses" (included in this application). Please see our website for an example plan: https://www.cochise.az.gov/development-services/special-uses
4. Letter of Authorization (for authorized agents, if applicable)
5. Hazardous or polluting materials attachment (only if hazardous materials are proposed, if applicable)
6. Deed restrictions (if applicable)
7. Outdoor lighting, manufacturers specifications (if applicable)
8. Processing Fee

Concept Plan Instructions for Special Uses

Sometimes, an applicant will seek approval for a particular special use or uses on a piece of property well ahead of actual construction or operation of that use. Often the exact dimensions of structures or configuration of uses on the property are not known yet until the uses have been approved and the applicant has invested resources into site planning. The Zoning Regulations allow for the submittal of a "Concept Plan" in lieu of a site plan in the case of phased special uses on one property or a special use where construction is not anticipated within one year. However, if the use(s) are approved by the Planning and Zoning Commission, then a detailed site plan meeting the requirements of the Zoning Regulations will be required for each use or phase and shall be in substantial conformance with the approved special use. If the site plan is not within substantial conformance with the approved use and concept plan, then the special use will need to be reviewed, in a public hearing, by the Commission once again to modify the original proposal. **Note: any**

anticipated waivers of site development standards such as setbacks, screening, landscaping or parking spaces must be requested, justified, and approved by the Commission prior to the issuance of a building permit.

In order to adequately review the proposed special use(s) on a piece of property, a Concept Plan must include at a minimum the following information:

- Parcel boundaries and adjacent roads;
- The general location, size and height of all structures and uses (existing and proposed), including minimum setbacks from parcel boundaries, washes and roads;
- The general location and minimum number of parking spaces to be provided, including proposed surface and width of driveways;
- Proposed screening and landscaping;
- Any significant topographical features (washes, hills, rock outcroppings, wetlands) and cultural features of the property and adjacent parcels;
- If applicable, project phasing (approximate schedule of uses and construction) and any other information deemed necessary to effectively review the Special Use.

Please state the reason for this request and why it should be supported.

The Applicant is requesting a Cochise County Special Use Permit (SUP) for approval to construct and operate a solar energy power plant with battery energy storage system. Electric utility companies/cooperatives continue to update their energy portfolios to include renewable energy sources such as solar generation facilities. The Herbie Solar Project (the Project) will provide up to 80 megawatts (MW) of clean renewable power, equivalent to the annual electricity use of 24,000 homes. The Project offers enhanced grid resiliency and support for future load growth needs and strategically positions Arizona to attract more industry to the state via clean power availability.

Identify the utility company/service provider for each of the following services and state if additional provisions or future connections are required in the space below.

Service Provider	**Service Provider**	**Additional Provisions Required**
Water/Well	3rd Party Contractor	The Applicant will file NOI to drill a well if new well is needed (ADWR).
Sewer/Septic	N/A; proposed leach field associated w/ O&M bldg	
Electricity	Sulphur Springs Valley Electric Cooperative	
Natural Gas	N/A	
Telephone	Cellular (N/A)	
Fire Protection	Willcox Fire Department	
Waste Disposal	Trash to be removed from site by contractors as it is generated	

Is this request consistent with all deed restrictions or private covenants in effect for this property? If applicable, please include a copy of these restrictions/covenants with this application.

☐ Yes ☐ No ☑ Not applicable (no deed restrictions or covenants)

Describe all **existing** structures/uses present on the subject parcel. Note: the size and location of existing structures must be shown on the accompanying site plan.

With exception of a private water well and small wind turbine used to run the water pump for cattle, the subject parcel is vacant and currently used as ranch land.

Describe all **proposed** structures/uses on the parcel that to be placed on the parcel. Note: the size and location of proposed structures must be shown on the accompanying site plan.

The Project will be comprised of rows of solar modules mounted on racking equipment that tracks the sun throughout the day. The racking equipment sits on top of steel piles that are directly driven into the ground. All the solar modules are connected to photo voltaic inverters using a network of conductors and safety disconnect boxes. These inverters will be used to convert the direct current power generated by the solar modules to alternating current power, while the medium voltage transformers located next to each inverter will then "step up" the low voltage power to medium voltage. The output power from each transformer is collected using conductors which carry the power to the Project substation. The power is then stepped up to transmission voltage, using the main power transformer located at the substation, before connecting to the gen tie power line. A battery energy storage system (BESS) is planned to be constructed as part of the Project which will require inverters, transformers, a cooling system and fire detection and prevention system. The Project will also include security fencing and an operations and maintenance building; there will be a leach field associated with the building (see Site Plan, Appendix B).

Is the proposed special use consistent with stated purpose of the current zoning district? Explain.

The Project site is located in zoning district RU-4 and designated as Category B. The proposed solar and battery energy storage facilities are consistent with the stated purpose of these districts. Category B areas include the Areas adjacent to Category A Urban Growth Areas. It also encompasses larger unincorporated communities of the County. RU-4 zoning district purposes for non-residential and non-agricultural activities, are to serve local needs or provide a service and are compatible with rural living. In addition, they are to allow consideration of some more intense non-residential uses as Special Uses that are inappropriate in more densely populated urban/suburban areas Pursuant to the Cochise County Zoning Ordinance, solar energy power plants may be permitted in RU zoning districts by Special Use Authorization only.

Describe all intermediate and final products/services that will be produced/offered/sold, if applicable.

The Project will generate electricity to be sold under long-term Power Purchase Agreements (PPAs) with an investor-owned utility company/cooperative.

What materials will be used to construct the new building(s)? (Note, for an existing building(s), please also list the construction type(s), i.e., factory-built building, wood, block, metal).

The Project will require one factory-built building for operations and maintenance workers and equipment; it will be approximately 1,750 square feet in size.

Will the project be constructed/completed within one year or phased?

☑ One year

☐ Phased

If this is a phased project, describe the phases here and physically depict them on the site plan.
N/A

What are the days and hours of operation (if applicable)?

Days of the week: Everyday

12 AM to 11:59 PM

Number of employees (if applicable): Initially:Approximately 600 during construction
Future: 2-4 employees during operation

Total average daily traffic generated (non-residential uses):

How many vehicles will be entering and leaving the site (per day)? 160

Total trucks (e.g., by type, number of wheels, or weight)? 30 round trips per day for 18 wheel trucks

Estimate which direction(s) and on which road(s) the traffic will travel from the site.

Ingress/egress both from State Rte 186 to S Blue Sky Rd

If more than one direction, estimate the percentage that travel in each direction.

N/A

At what time of day, day of week and season (if applicable) is traffic the heaviest?

During daylight hours, Mon-Fri, midway through construction of the Project

Water Use:

Estimate the total gallons of water needed for the proposed use: per day 0 per year 0

Please indicate your water source N/A

If your property is served by a private well, show the existing or proposed location on the site plan.

List any strategies you will employ, on site, to minimize water use, recycle water, and/or enhance onsite natural recharge.

Water consumption is not needed to generate electricity from solar panels. Module cleaning will not require water. The Project layout was designed to avoid natural drainages to allow for continued on-site conveyance and natural recharge, as applicable.

Will your property be served by a septic system? ☑ Yes ☐ No

If yes, show the septic tank, leach field and 100% expansion area on the site plan, and indicate whether the system is existing or proposed.

Does your parcel have permanent legal access*? If no, what steps are you taking to obtain such access? (*Our Zoning Regulations state that no building permit for a nonresidential use shall be issued unless a site has permanent and direct access to a publicly maintained street or street where a private maintenance agreement is in place. Said access shall be not less than twenty (20) feet wide throughout its entire length and shall adjoin the site for a minimum distance of twenty (20) feet. If access is from a private road or easement provide documentation of your right to use this road or easement and a private maintenance agreement.)

Yes, permanent and direct access to the Project site is provided from a county maintained road, S Blue Sky Road. The applicant will maintain the road using dust suppression during construction.

Which streets or easements will be used for traffic entering or exiting the property? (Please label on the accompanying plan)

Entering and exiting the property will utilize State Route 186 to S Blue Sky Road from the south. Please see Site Plan (Appendix B) for street locations.

What impact will this have on the traffic volume of roads serving this subject property?

The impact from the Project to traffic volume will occur primarily during the construction period of the Project. It is estimated that there will be 15-30 delivery trucks/day on average and construction vehicles could be up to 160/day during the peak of construction (such peak to last about 2-3 months). Once the Project is operational, there will be very minimal traffic as the Project will be remotely monitored through a supervisory control and data acquisition (SCADA) system/manned daily by 1-3 trucks per day (similar to a residence).

How many driveway cuts are proposed along streets or easements to allow site access? State whether this is an increase/decrease and whether any existing cuts will need relocation.

The Project will use an existing public road; public access will end at the entrance to the Project site at an access gate. No driveway cuts are proposed.

Does the subject parcel have site access onto a major road?

☐ Yes ☑ No

Are you requesting any modifications or waivers from site development standards? If yes, explain.

No

Is the subject property within Sierra Vista Sub-Watershed Overlay Zone? If so, please indicate this, and that you understand that it may be subject to additional plan reviews and inspections whenever a building permit is required.

☐ Yes, and I understand the permitting requirements ☑ No, it's outside the boundaries

Please describe your citizen review process (if applicable). Specifically, state whether you received any responses to your mailed notice or public meeting. Explain how your special use application has incorporated the feedback you received.

The Herbie team has instituted multiple outreach efforts to engage the Cochise County community, including mailing notifications of the proposed Project, circulating newspaper ads, establishing a project website, holding an open house, and providing Project informational flyers to open house attendees. Herbie Solar LLC received 5 phone calls in response to newspaper ads/letters. Individuals that responded responded with curiosity about the project, requested additional information, or wanted to know the proximity of the project to their property. No negative feedback was received.

Please see Appendix C for the Citizen Review Report which includes copies of the mailings, newspaper ads, and informational flyers.

Describe any outdoor activity associated with your special use proposal, if applicable.

The Project will be constructed and operated outdoors.

Will outdoor storage of equipment, materials or products be needed? If yes, show the location on the site plan. Describe any measures to be taken to screen this storage from neighboring properties.

During construction, a temporary laydown yard will be needed to store equipment and materials. Given the remote location of the Project, and the fact that the laydown yard is a temporary use during construction, the applicant is not proposing to screen the Project equipment and materials stored at the laydown yard. Please refer to the proposed Site Plan (Appendix B) for the location of the temporary laydown yard.

Will any noise or vibrations be produced that can be heard or felt on neighboring properties on a regular basis? if yes; describe the level and duration of this noise. What measures are you proposing to prevent this noise from being heard on neighboring properties?

Once the Project is operational, the Project will not produce any noise or vibrations that can be heard or felt on neighboring properties. The majority of the noise will be produced during the construction period, though noise impacts to neighboring properties are limited due to the remote rural location of the Project.

Will odors be created? If yes, what measures will be taken to prevent these odors from escaping onto neighboring properties?

The Project will not produce any odors.

Will any on-site activities attract pests, such as flies or mice? If yes, what measures will be taken to prevent a nuisance on neighboring properties?

There will be no on-site activities that attract pests.

Will additional dust be created on a regular basis? If yes, what measures will be taken to prevent this dust from escaping onto neighboring properties or roadways?

A water truck or possibly environmentally safe polymers will be used as needed for dust control during construction. Post-construction, areas of temporary disturbance will be re-stabilized with the application of native seed to restore vegetation. Once stabilized, the site will not create additional dust.

Is outdoor lighting proposed? If yes, show the location(s) on the site plan. Indicate how neighboring properties and roadways will be shielded from light spillover. Please submit manufacturer's specifications for all light fixtures.

☐ Yes ☑ No

Will you be performing any off-site construction (e.g., access aprons, driveways, and culverts)? If yes, show details on the site plan. Note: The County may require off-site improvements reasonably related to the impacts of the use such as road or drainage improvements.

☐ Yes ☑ No

Show on-site drainage flow on the site plan. Will drainage patterns on site be changed? If so, please indicate on the site plan and describe below.

Drainage flow arrows are shown on the site plan. As minimal grading is needed, it is not anticipated that drainage patterns will change. Solar modules will be installed at existing grade.

If more than one acre is to be cleared, describe the proposed dust and erosion control measures to be used and show on site plan, if appropriate.

A water truck or possibly environmentally safe polymers will be used as needed for dust control during construction. Erosion and sediment control measures, such as silt fence, silt sock, and/or stabilized construction entrance will be implemented to reduce soil transmission until the site is permanently stabilized. Disturbed areas will be permanently stabilized through re-seeding (temporary disturbance areas) and compaction and/or paving (permanent disturbance areas such as concrete pads).

Do you anticipate the use of any hazardous or dangerous materials? If yes, please complete a "Hazardous or Polluting Materials Attachment" and attach it to this application.

☐ Yes ☑ No

I hereby certify that I am the owner or duly authorized owner's agent and all information in this questionnaire, in the Joint Permit Application and on the site plan is accurate. I understand that if any information is false, it may be grounds for revocation of the Commercial Use/ Building/ Special Use Permit. In addition, I hereby request all inspections necessary to process this application, and if the permit is issued, I request all inspections necessary to monitor progress, and document completion, at all stages of the work related to this permit. Failure to obtain permits may result in fines or other penalties.

Hannah Alford 10/23/23

Applicant Signature Date

Authorization for Application for A Special Use

Herbie Solar LLC

To Whom it May Concern,

I, on behalf of the property owners on which the Herbie Solar Project is proposed, authorize Herbie Solar LLC to submit an Application for Special Use for the Herbie Solar Project.

Property Owner

STEPHEN A. KLUMP

By: _____

Name: Stephen A. Klump

I certify that the following person personally appeared before me on this day, acknowledging to me that he or she signed the foregoing document: Stephen A. Klump

Date: 10/17/23

Notary Public: _____

Printed Name: Maria Lugo

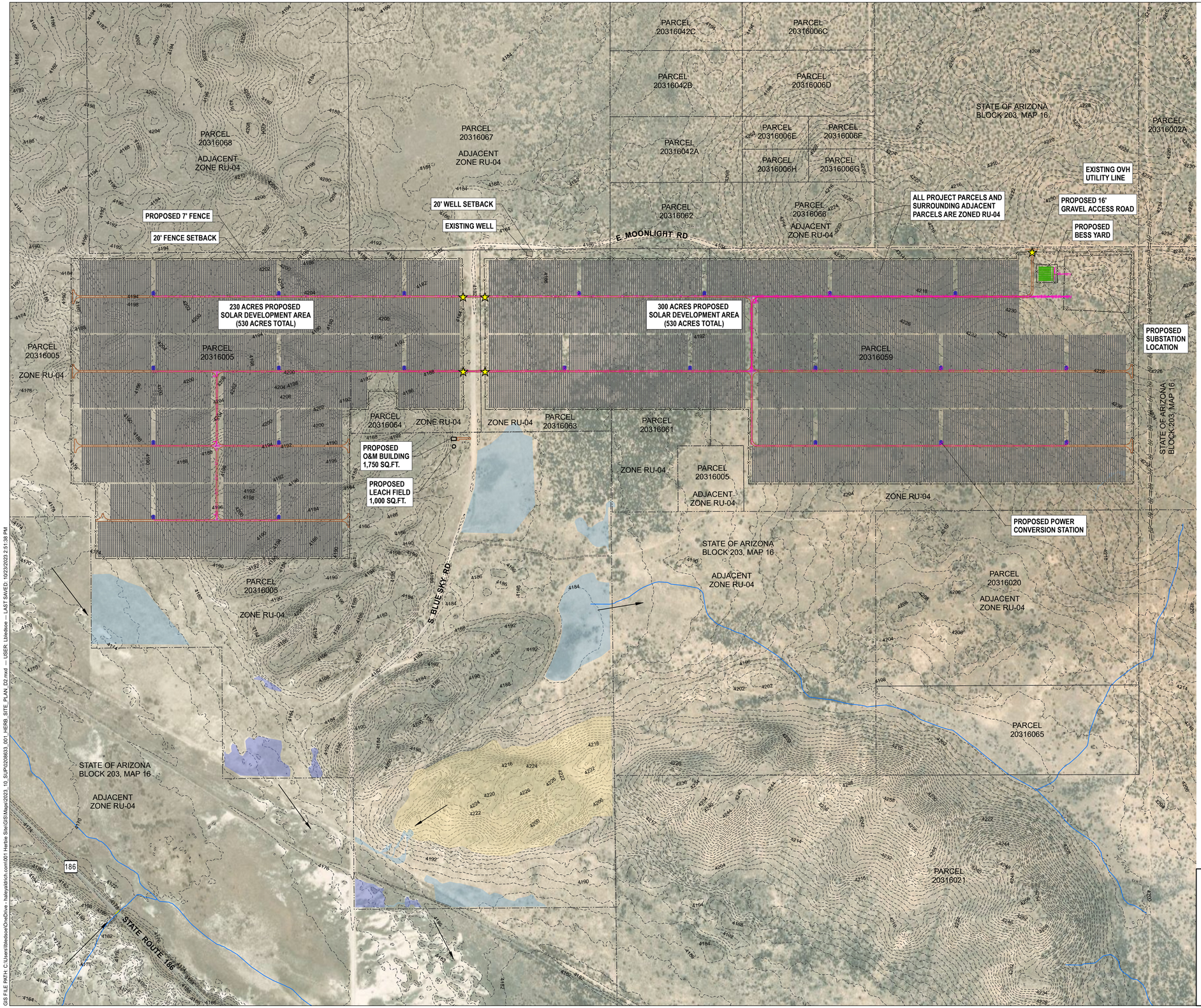
My Commission Expires:

8-4-25

[Notary Seal]

MARIA G. LUGO
Notary Public - State of Arizona
COCHISE COUNTY
Commission # 607840
Expires August 4, 2025

APPENDIX B
Site Plan



LEGEND

- PROPERTY LINE
- 2-FT TOPOGRAPHIC CONTOURS
- EXISTING OVERHEAD ELECTRIC
- EXISTING TWO-TRACK ROAD
- PROPOSED ACCESS GATE
- PROPOSED GRAVEL ACCESS ROAD
- PROPOSED 7' FENCE
- 20' FENCE SETBACK
- PROPOSED PV MODULE
- PROPOSED BATTERY ENERGY STORAGE SYSTEM (BESS)
- MV FEEDER CABLE
- POWER CONVERSION STATION
- NHD MAPPED STREAM
- WETLANDS AND WASHES
- DESERT PLAYA
- TOPOGRAPHIC RIDGE
- DRAINAGE FLOW ARROW
- 2-FT TOPOGRAPHIC CONTOURS

PARCELS: 203-16-005, 203-16-059, 203-16-061, 203-16-063, 203-16-064, 203-16-067, 203-16-068

OWNERS: J. KATHRYN KLUMP AND KARRY KEITH KLUMP, STEPHEN A. KLUMP AND SHAYE E. KLUMP, PHILLIP A. KLUMP AND SHANNON KLUMP

SCALE: AS SHOWN

NOTES:

1. THERE ARE NO PROPOSED PAVED PARKING SPACES. THERE IS A PROPOSED GRAVEL PARKING AREA FOR 3 VEHICLES AT THE OPERATIONS AND MAINTENANCE (O&M) BUILDING.

2. THERE IS NO PROPOSED GRADING ANTICIPATED FOR INSTALLTION OF THE SOLAR MODULES; MODULES WILL BE INSTALLED ON EXISTING GRADE. MINOR GRADING IS ANTICIPATED TO INSTALL THE PROPOSED SUBSTATION AND GRAVEL ACCESS ROADS.

3. PROJECT WILL BE CONSTRUCTED ALL AT ONCE (NOT PHASED).

4. THE LAND BELOW THE SOLAR ARRAYS WILL BE PLANTED WITH A LOW-GROWING SEED MIX OF NATIVE GRASSES.

5. THERE IS NO PROPOSED SCREENING.

6. THERE ARE NO CULTURAL RESOURCES LOCATED WITHIN THE PROJECT DEVELOPMENT AREA.

7. STREAMS DATA SOURCE: USGS NATIONAL HYDROGRAPHY DATASET (NHD)

8. WETLANDS AND WASHES DATA SOURCE: HALEY & ALDRICH, INC. WETLAND DELINEATION (SEPTEMBER 2023) AND APPROXIMATION

9. AERIAL IMAGERY SOURCE: ESRI WORLD IMAGERY

N

300 150 0 300

SCALE IN FEET

HALEY ALDRICH

HERBIE SOLAR PROJECT
COCHISE COUNTY, ARIZONA

SITE PLAN

OCTOBER 2023

GIS FILE PATH: C:\Users\lbledsoe\OneDrive - haleyaldrich.com\001 Herbie Site\GIS\Maps\2023_10_SUP\020863_001_HERB_SITE_PLAN_D2.mxd — USER: LbledsoE — LAST SAVED: 10/23/2023 2:51:38 PM

APPENDIX C
Citizen Review Report

Herbie Solar - Citizen Review Report

The Herbie Solar Project team is committed to engaging the Cochise County community, and as a result instituted multiple outreach efforts including mailing notifications of the proposed project, holding an open house, circulating newspaper ads, establishing a project website, and providing Project informational flyers to open house attendees.

Mailings

On October 2nd, 2023, the Herbie Project team mailed notification of the proposed development of the Herbie Solar Project to all landowners within 500 feet of the site via certified mail in both English and Spanish. The content of the letter that was sent out can be found in Attachment A. The mailing list included:

- The physical addresses of 49 landowners based on assessor records.
- A Map of the proposed location of the Project
- The Proposed acreage of land project will cover
- An Invitation to Project open house

Newspaper Publications

The newspaper ad that was circulated can be found in Attachment B.

- Herald/Review
  - Project description and open house invitation
  - Circulation – 10,000 impressions
  - Ran October 18th, 21st, and 22nd
- Arizona Daily Star
  - Project description and open house invitation
  - Circulation – 30,000 impressions
  - Ran October 11th, 2023, in print
  - Ran October 9th to October 13th digitally on Tucson.com

Project Website

The Project website https://www.korsail.com/herbie-solar-project/ was created and maintained to provide project and contact information to all interested parties.

In Person Open House

The Herbie Solar Project Team will hold an informal open house on October 25th, 2023, at 6pm at the Willcox Community Center. The open house allows community members to learn more about the Project from informational display boards and ask the Applicant questions. A Project brochure will be provided to open house attendees.

Informational Flyers

Informational flyers were provided to open house attendees. The flyer can be seen in Attachment C.

Feedback Forms

Feedback forms were provided to open house attendees. The feedback forms can be seen in Attachment D.

ATTACHMENT A

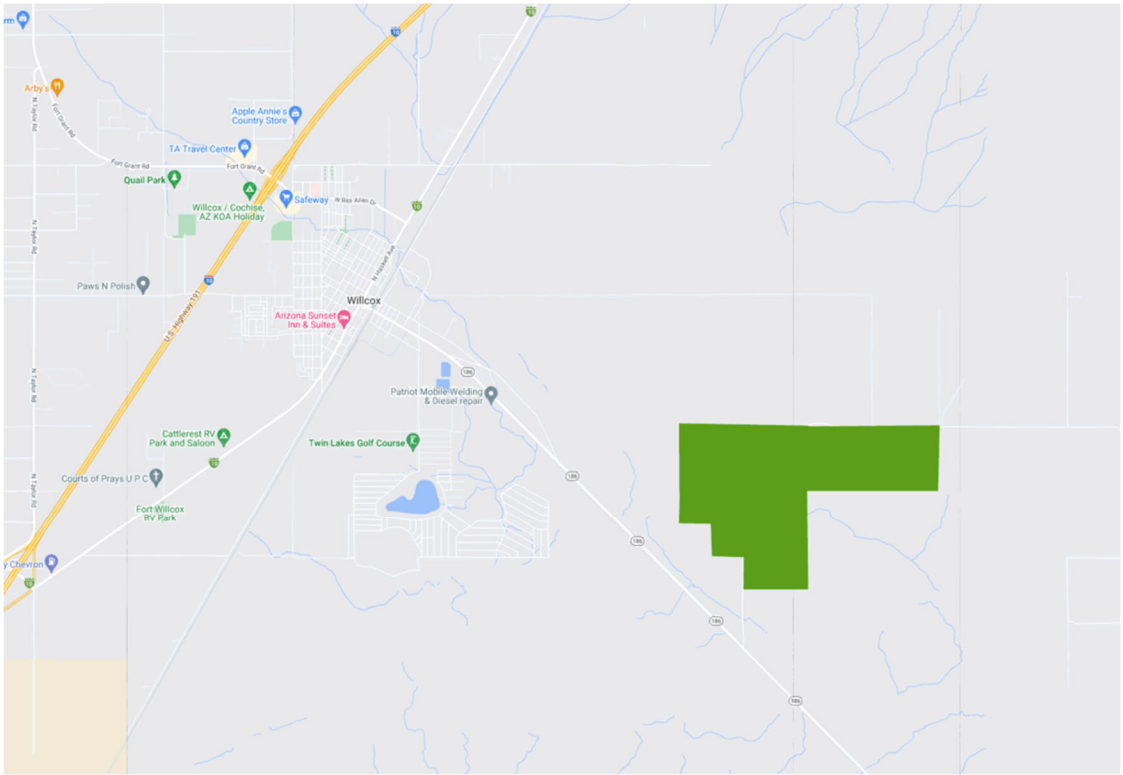
Hello NAME,

Korsail Energy is currently developing the Herbie Solar Project near your property in Willcox, AZ. The Herbie Solar Project will cover approximately 650 acres of land within the 1,500-acre green area on the map below. This project will provide power to over 24,000 homes while producing no pollution, noise, or other disturbances to neighboring properties.

The Herbie Project team is committed to working with the local community throughout the project's entire lifecycle. Accordingly, we would appreciate the opportunity to get in touch with you. We will be hosting a public town hall meeting on 10/25/23 at the Willcox Community Center at 6pm.

We hope to see you there!

In the meantime, please contact us with any questions or comments at projects@korsail.com or by phone at (720) 310-8834



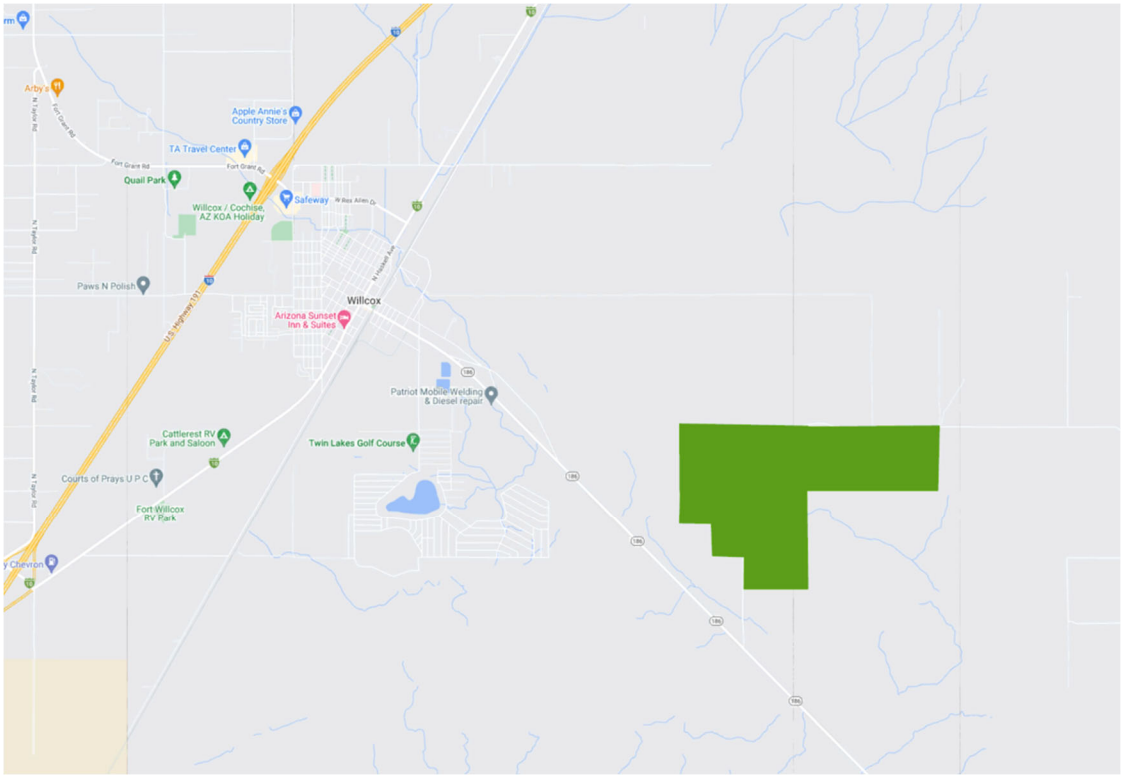
Hola NOMBRE,

Korsail Energy esta desarollando el Proyecto Solar Herbie cerca de su propiedad en Wilcox, AZ. El Proyecto Solar Herbie va a cobrar aproximadamente 650 acres de tierra dentro de la zona verde de 1,500 acres en el mapa abajo. Este Proyecto es capaz de generar energia para más que 24,000 hogares sin emiciones, ruido, ni molestar las propiedades vecinas.

El equipo del Proyecto Herbie estan dedicados a trabajar con la communidad local desde la vida entera del proyecto. Por eso, apreciamos la oportunidad de hablar con ustedes. Seremos los anfitriones de una asamblea pública en 10/25/23 en el Willcox Centro Comunitario a las 6 de la tarde.

¡No vemos ahÍ!

Mientras tanto, favor de contactarnos con sus preguntas y comentarios en projects@korsail.com o sobre el telefono en (720) 310-8834.



ATTACHMENT B

Judge orders Hamadeh to pay more than $42,000 for Mayes' legal fees

BY HOWARD FISCHER
Capitol Media Services

PHOENIX — Abe Hamadeh has been ordered to pay more than $42,000 in legal fees to Kris Mayes in his unsuccessful effort to convince the Arizona Supreme Court to overturn the results of the attorney general's race.

In a new order Tuesday, Chief Justice Robert Brutinel said the award is appropriate because the Hamadeh had "misrepresented" to the justices that he had sought a final — and appeal-able — order from Mohave County Superior Court Judge Lee Jantzen, who ruled the GOP contender had not proven he had outpolled Mayes in the November general election and then denied him a new trial to present more evidence.

Brutinel said there was no reason for Hamadeh to even file any pleadings with the state's high court as all of the claims he made that Jantzen erred in his decisions could have been presented to the state Court of Appeals.

All that, the chief justice said, "unnecessarily expanded the proceeding and compelled respondents to incur the unnecessary expenses of filing their court-ordered responses."

It isn't just Mayes who is getting reimbursed.

Brutinel said Secretary of State Adrian Fontes, who was named as a defendant in Hamadeh's bid to overturn the election results, is entitled to $12,921 in his own legal fees.

The decision to award fees by itself is no surprise.

It stems from Hamadeh's contention that Jantzen had acted improperly in limiting the amount of time he had to prepare his legal arguments seeking to overturn his loss to Mayes. He said that denied his attorneys the ability to find the evidence that some people who were legally entitled to vote did not have their ballots tabulated.

He also argued that more time would have enabled his legal team to prove there were a sufficient number of situations where tabulators reported an "undervote" in the race for attorney general — essentially, that the voter had skipped the race — but where an examination of the ballots would show that people did make a choice. And given that Hamadeh outpolled Mayes among Election Day voters, Hamadeh said that could more than make up for his 280-vote deficit.

But the justices ignored all that, instead concluding that Hamadeh's lawyers acted prematurely — and that they lied.

Brutinel said Hamadeh's legal team told him and his colleagues they had "diligently sought" a final ruling from Jantzen, setting the stage for an appeal.

The attorneys for Mayes and Fontes pointed out that assertion was false.

All that, said Brutinel, made Hamadeh ineligible to seek the special relief he wants directly from the Supreme Court. So the justices told him to follow the normal procedures and file "a proper appeal in the Court of Appeals."

Only after the appellate court has had its say — something that could take months — would the justices be willing to consider his arguments.

That left the question of the request for Hamadeh to pay legal fees, which Brutinel already said were appropriate.

"Petitioners were not only aware that they needed a final judgment to seek appellate relief but also misrepresented to this court that they had sought such relief when they had not done so," the chief justice wrote. And that misrepresentation, he said, was the underlying premise of Hamadeh's now-dismissed petition to the Supreme Court.

In filings with the high court, Hamadeh's lawyers asked that the $42,135 request by Mayes' attorneys be reduced, saying there was no evidence that there was "significant difficulty or intricacy" required in their work.

Brutinel pointed out that Republican legislative leaders complicated matters by filing their own legal brief, saying that the time limits Jantzen had set for Hamadeh to prove his case "imparted an artificially constricted scope to provisions that the Legislature intended to secure a robust fact-finding process."

And all that, the chief justice pointed out, "raised the stakes" and required Mayes' lawyers to do more work.

As to Fontes, Brutinel acknowledged that, generally speaking, the secretary of state is a nominal party to election challenges.

But here, too, he said, Hamadeh dragged the Secretary of State's Office in by accusing it — at the time of the original trial before Jantzen under the control of Katie Hobbs — of hiding critical information about the results of a recount in the race even as Hamadeh was arguing for a new trial.

And Thomas Basile, writing for Senate President Warren Petersen and House Speaker Ben Toma, accused Fontes of "churlish imperiousness" in rejecting Hamadeh's bid to reexamine some ballots.

"The court concludes that petitioners' allegations in these proceedings have made the secretary more than a 'nominal' defendant who need not be expected to remain silent to refute these charges," Brutinel wrote. And that, he said, entitled Fontes to recoup the office's legal fees.

None of this resolves the underlying claim by Hamadeh that he actually outpolled Mayes despite the final tally showing him 280 votes behind his Democratic foe. His case is now pending before the state Court of Appeals.

Whoever loses there eventually is expected to wind up back at the Supreme Court.

Despite his ongoing legal battle over the 2022 election, Hamadeh announced late Tuesday he would seek the seat in the U.S. House of Representatives that is coming open at the end of 2024 by the decision by Rep. Debbie Lesko not to seek another term. Lesko, a former state lawmaker elected to Congress in 2018, said she wants to spend moe time with her family, including her 94-year-old mother.

Hamadeh said he wants to go to Congress to help Trump "make America great again," a presumption based on the outcome of next year's presidential race.

The district that encompasses much of Glendale and Peoria is heavily Republican, making whoever gets the nomination a heavy favorite in the general election.

Other possible contenders include House Speaker Ben Toma and state Treasurer Kimberly Yee.

ATTACHMENT C

Herbie Solar and Storage Project

120 MW

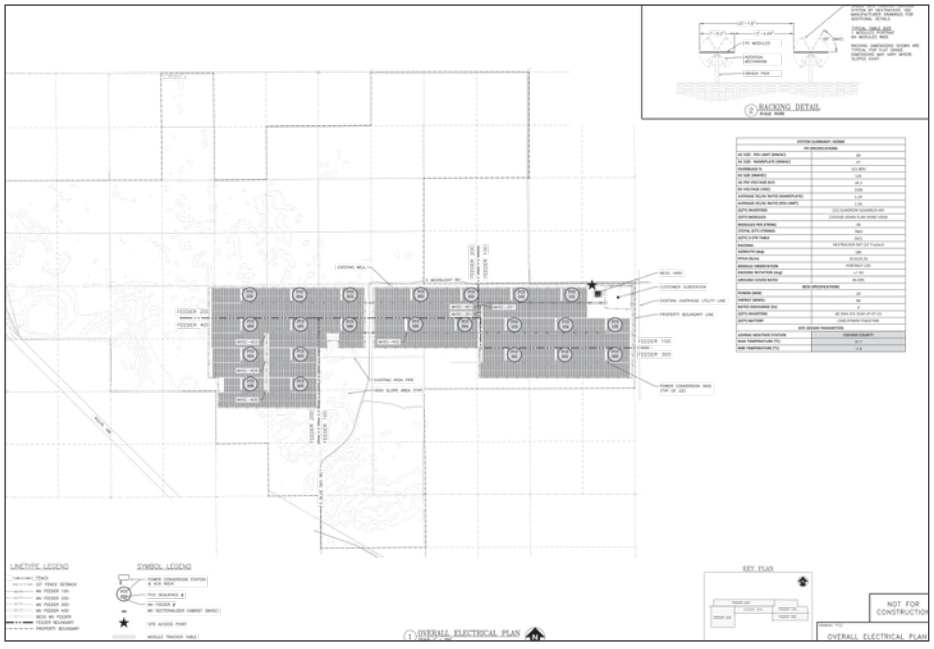
Herbie Solar is a proposed 120-megawatt (MW) solar and 20MW storage facility.

2027

The Herbie Solar project is expected to be operational in July 2027.

24,000

This project is expected to produce enough energy to power 24,000 homes annually.



This project is proposed on privately owned land in Cochise County, AZ.

Herbie Solar has secured a point of interconnection on the Apache-Redtail transmission line.

Herbie Solar expects to create 600-900 jobs during construction, with 2-3 long-term opportunities in maintenance.

The project's lifespan is 50 years, after which the land will be reclaimed, restored, and returned to original use.

Benefits of Solar

Solar energy helps diversify energy sources and increase reliability, making the electric grid more resilient to disruptions.

Solar projects help create both long- and short-term jobs, many of which require skilled labor in construction, operation, and maintenance. This creates additional employment and income-generating opportunities for communities.

With little noise or light pollution, solar facilities are minimally disruptive and offer significant community and landowner benefits.

Who is Korsail?

Korsail Energy develops innovative, community-oriented renewable energy projects from start to finish. Korsail relies on deep industry knowledge and experience to create best in class projects and provide carbon-free energy to communities across the country.

Innovative Energy

Korsail Energy develops innovative, community-oriented renewable energy projects from start to finish, relying on deep industry knowledge and experience to create best-in-class projects and provide carbon-free energy to communities nationwide.

Intentional Approach

Our community-based approach is unique to Korsail Energy and the intentional team we have cultivated. We approach each step in the development process with community needs at the forefront and work tirelessly to uphold that commitment.

Experience and Integrity

With over 20 years of combined energy industry experience and 2GW in development assets, the Korsail team values landowner feedback and prioritizes transparency and integrity in all community relationships.

Community Focused

Our team works side by side with landowners and local stakeholders during our project development in a way that reflects our core values: integrity, transparency, and community relationships.

KORSAIL ENERGY

Get in Touch //

We'd love to hear from you. Reach out at info@korsail.com.

ATTACHMENT D

Your feedback is valuable and taken seriously.
Please share your thoughts below:

Your feedback is valuable and taken seriously.
Please share your thoughts below:

APPENDIX D
USFWS and AZGFD Consultation

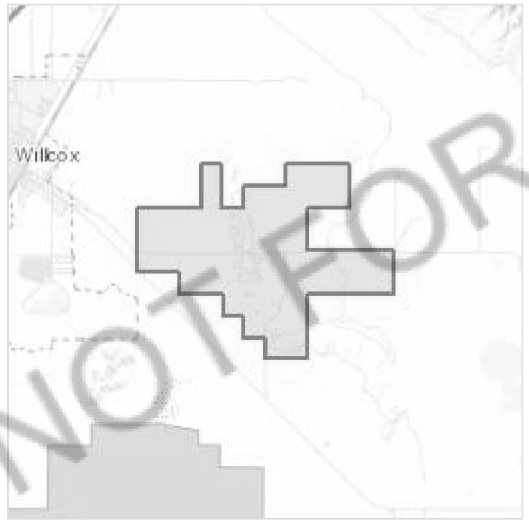
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Cochise County, Arizona



Local office

Arizona Ecological Services Field Office

(602) 242-0210
(602) 242-2513

9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. 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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Jaguar Panthera onca Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3944	Endangered
Mexican Wolf Canis lupus baileyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3916	EXPN

Birds

NAME	STATUS
Mexican Spotted Owl Strix occidentalis lucida Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened
Northern Aplomado Falcon Falco femoralis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1923	EXPN
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Chiricahua Leopard Frog Rana chiricahuensis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1516	Threatened

Insects

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

Flowering Plants

NAME	STATUS
Arizona Eryngo Eryngium sparganophyllum There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/10705	Endangered
Wright's Marsh Thistle Cirsium wrightii There is **final** critical habitat for this species. https://ecos.fws.gov/ecp/species/8963	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

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

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- 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

There are bald and/or golden eagles in your project area.

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.	Breeds Oct 15 to Jul 31
Golden Eagle *Aquila chrysaetos* 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/1680	Breeds Jan 1 to Aug 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.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

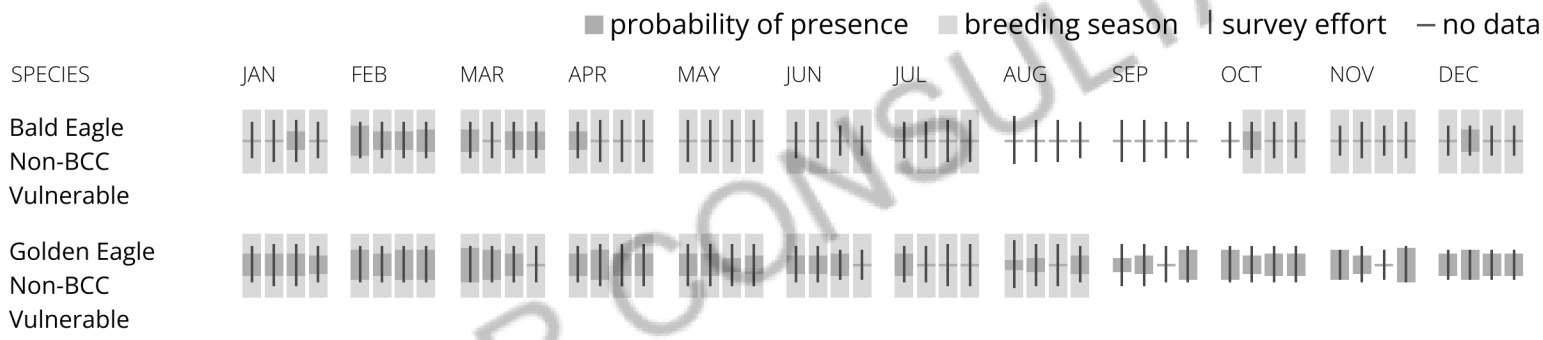
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles 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 Rapid Avian Information Locator (RAIL) Tool.

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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

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

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

Arizona Woodpecker Picoides arizonae — Breeds Apr 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Baird's Sparrow Ammodramus bairdii — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5113

Bald Eagle Haliaeetus leucocephalus — Breeds Oct 15 to Jul 31

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.

Bendire's Thrasher Toxostoma bendirei — Breeds Mar 15 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9435

Black-throated Gray Warbler Dendroica nigrescens — Breeds May 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Chestnut-collared Longspur Calcarius ornatus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

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/1680

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Mexican Whip-poor-will Antrostomus arizonae — Breeds May 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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
Rufous-winged Sparrow Aimophila carpalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 15 to Sep 30
Sprague's Pipit Anthus spragueii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8964	Breeds elsewhere
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
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 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.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

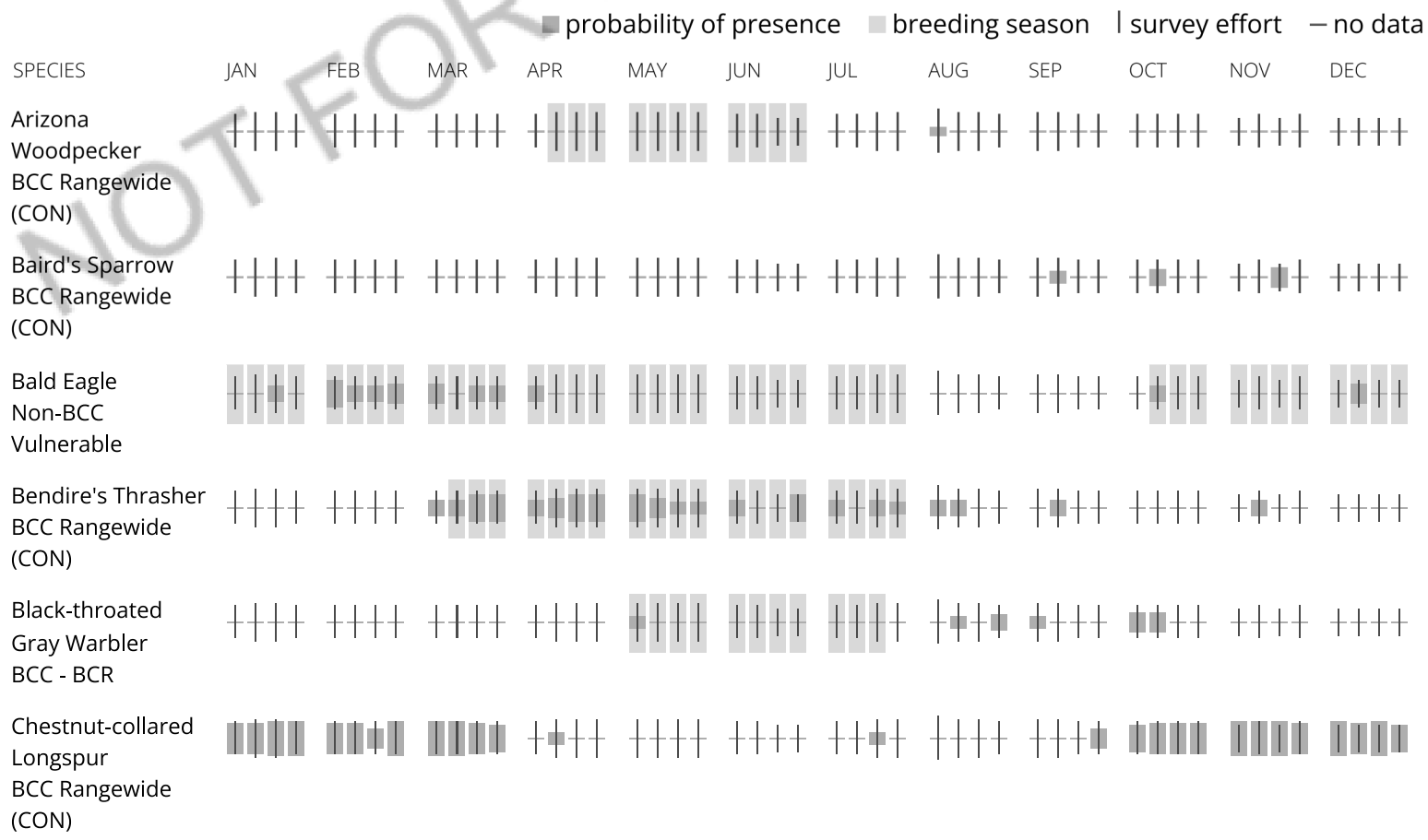
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

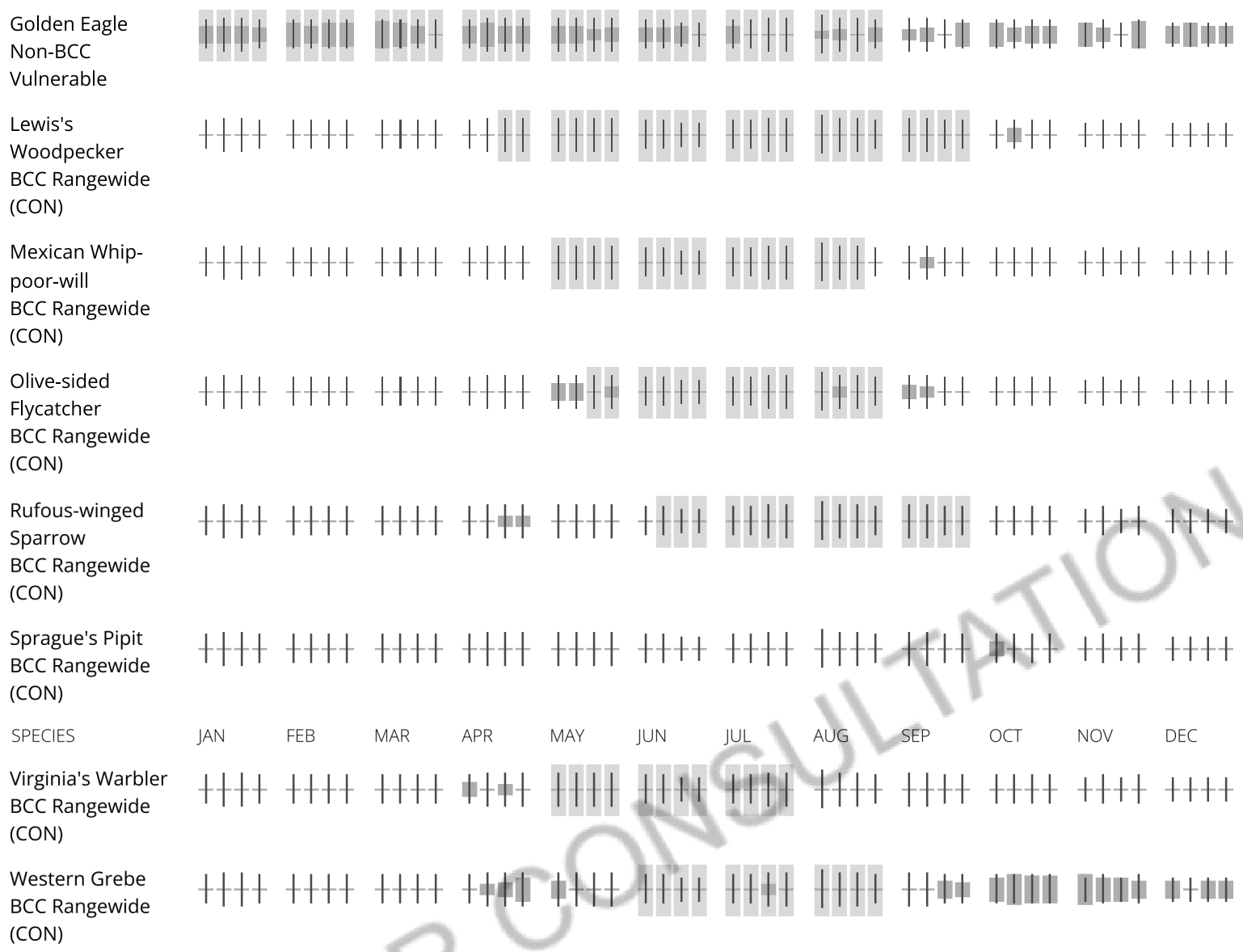
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.





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 list of migratory birds that potentially occur 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 Rapid Avian Information Locator (RAIL) 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 or migrating in my 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 query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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.

Facilities

National Wildlife Refuge lands

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 at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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.

This location overlaps the following wetlands:

FRESHWATER POND

PUSJ

RIVERINE

R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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:
Potential Solar Project - 2

Project Description:
Proposed solar energy facility

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

Contact Person:
Kim Lodge

Organization:
Haley & Aldrich, Inc.

On Behalf Of:
CONSULTING

Project ID:
HGIS-19654

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. Arizona Wildlife Conservation Strategy (AWCS), specifically Species of Greatest Conservation Need (SGCN), 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.

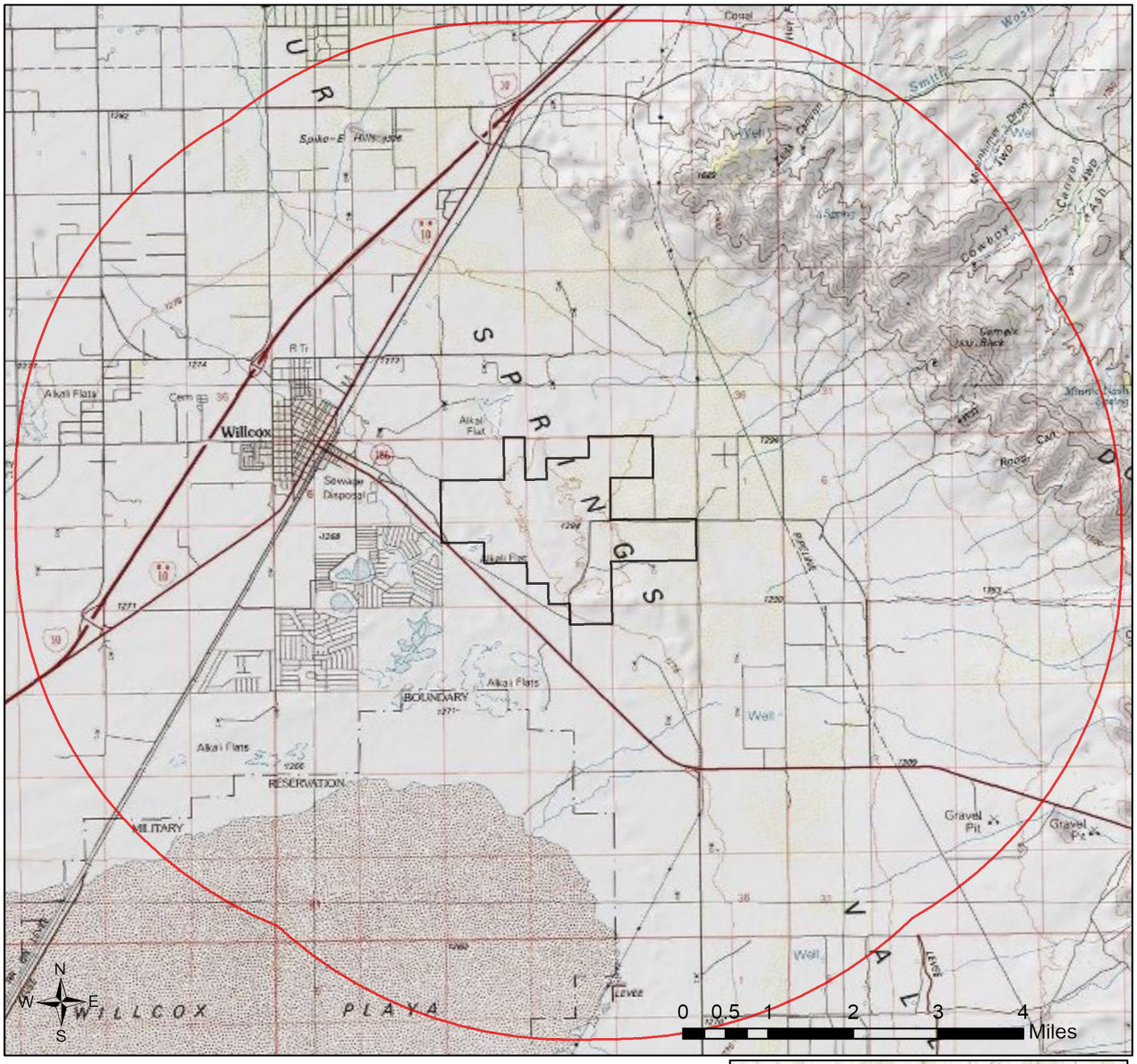
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

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

Potential Solar Project - 2

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 2,281.52

Lat/Long (DD): 32.2385 / -109.7826

County(s): Cochise

AGFD Region(s): Tucson

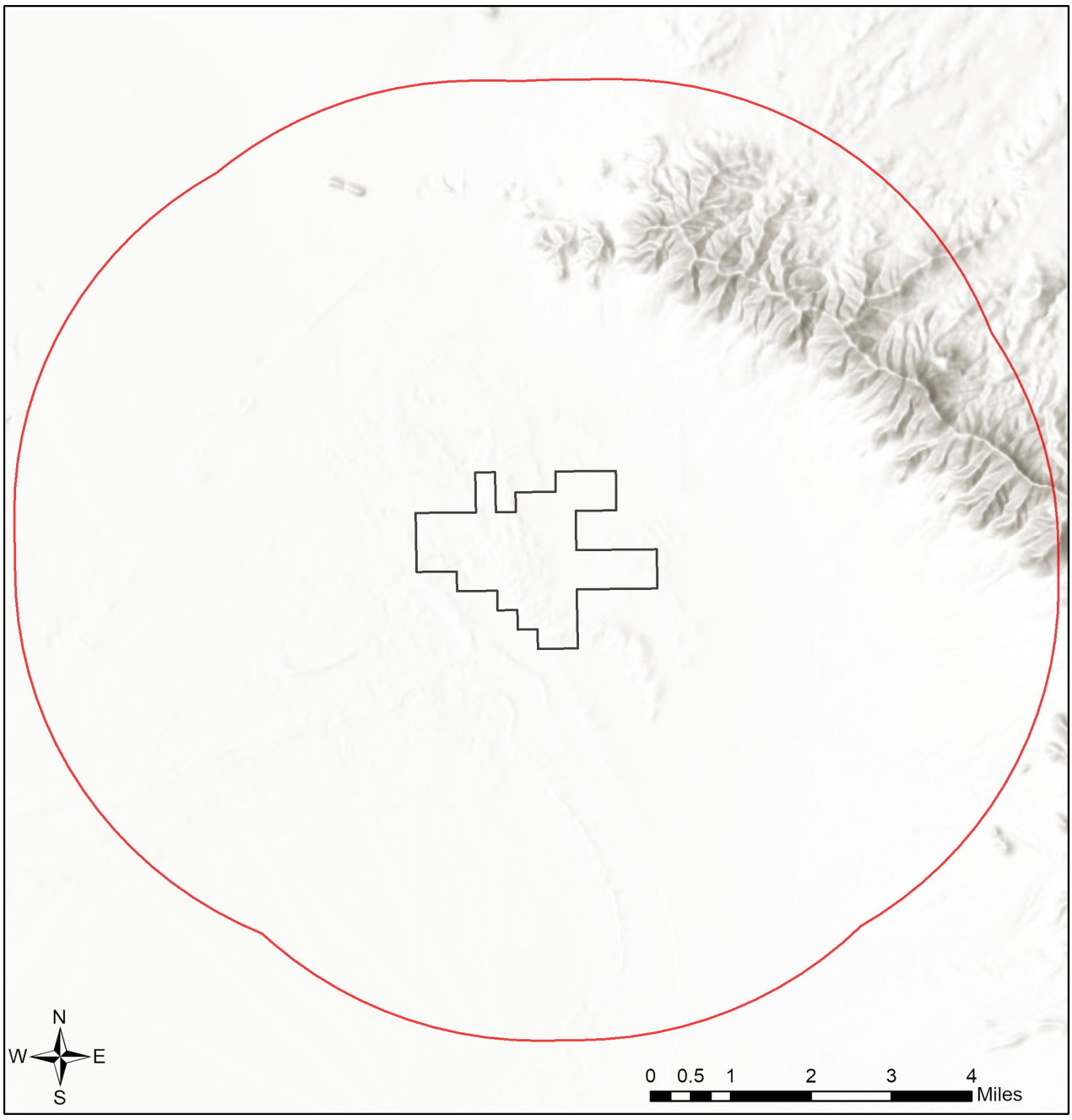
Township/Range(s): T14S, R25E

USGS Quad(s): WILLCOX NORTH; WILLCOX SOUTH

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

Potential Solar Project - 2

Web Map As Submitted By User



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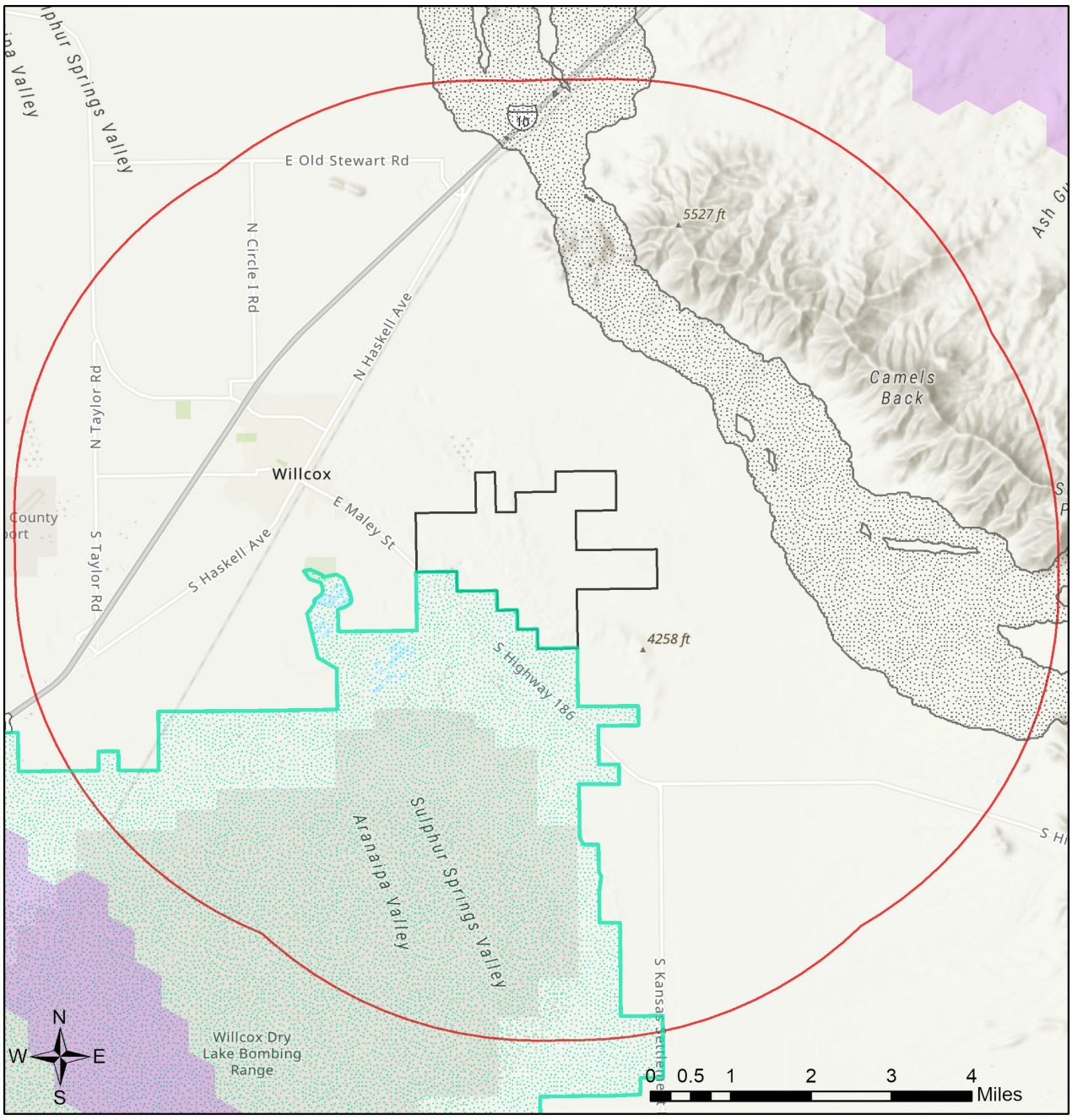
Potential Solar Project - 2

Important Areas



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

Project Size (acres): 2,281.52

Lat/Long (DD): 32.2385 / -109.7826

County(s): Cochise

AGFD Region(s): Tucson

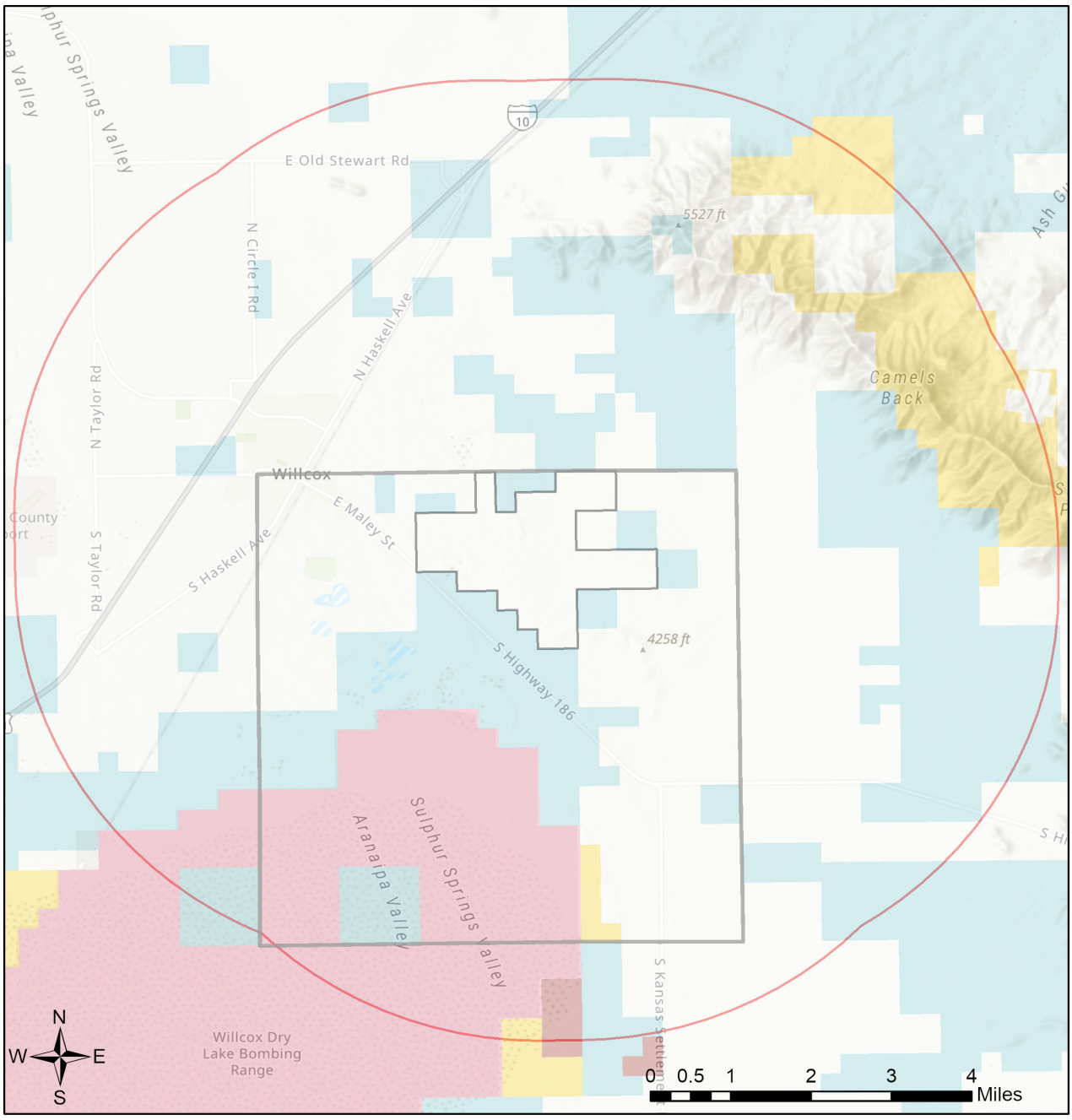
Township/Range(s): T14S, R25E

USGS Quad(s): WILLCOX NORTH; WILLCOX SOUTH

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

Potential Solar Project - 2

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): 2,281.52

Lat/Long (DD): 32.2385 / -109.7826

County(s): Cochise

AGFD Region(s): Tucson

Township/Range(s): T14S, R25E

USGS Quad(s): WILLCOX NORTH; WILLCOX SOUTH

Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Allium rhizomatum	Redflower Onion				SR	
Amphispiza bilineata	Black-throated Sparrow					2
Aspidoscelis arizonae	Arizona Striped Whiptail			S		
Aspidoscelis sonorae	Sonoran Spotted Whiptail					2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Auriparus flaviceps	Verdin					2
Buteo swainsoni	Swainson's Hawk					2
Calamospiza melanocorys	Lark Bunting					2
Callipepla squamata	Scaled Quail					2
Campylorhynchus brunneicapillus	Cactus Wren					2
Cardinalis sinuatus	Pyrrhuloxia					2
Charadrius vociferus	Killdeer					2
Corvus cryptoleucus	Chihuahuan Raven					2
Danaus plexippus	Monarch	C		S		
Eremophila alpestris	Horned Lark					2
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC, BGA	S	S		
Heloderma suspectum	Gila Monster					1
Hypsiglena sp. nov.	Hooded Nightsnake					2
Icterus bullockii	Bullock's Oriole					2
Lanius ludovicianus	Loggerhead Shrike	SC				2
Melozone fusca	Canyon Towhee					2
Parabuteo unicinctus	Harris's Hawk					2
Phrynosoma cornutum	Texas Horned Lizard	SC				
Rana chiricahuensis	Chiricahua Leopard Frog	LT				1
Sceloporus slevini	Slevin's Bunchgrass Lizard		S	S		2
Tadarida brasiliensis	Brazilian Free-tailed Bat					2
Terrapene ornata luteola	Desert Box Turtle			S		
Toxostoma bendirei	Bendire's Thrasher					2

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
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Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Willcox Playa and Cochise Lakes	Conservation Opportunity Area					
Willcox Playa/Cochise Lakes IBA	Important Bird Area					

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
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Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Allium rhizomatum	Redflower Onion				SR	
Anaxyrus debilis insidior	Western Green Toad					
Arenaria melanocephala	Black Turnstone					
Aspidoscelis arizonae	Arizona Striped Whiptail			S		
Atriplex torreyi var. griffithsii	Griffiths' Saltbush					
Charadrius nivosus nivosus	Snowy Plover					2
Ellipsoptera nevadica citata	Chiricahua Tiger Beetle					
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population		S	S		
Heterodon kennerlyi	Mexican Hog-nosed Snake					
Hypsiglena sp. nov.	Hooded Nightsnake					2
Marsilea vestita	Hairy Water Clover					
Neogale frenata	Long-tailed Weasel					3
Peritoma multicaulis	Slender Spiderflower				SR	
Phrynosoma cornutum	Texas Horned Lizard					
Psorothamnus scoparius	Broom Dalea					
Recurvirostra americana	American Avocet					
Reithrodontomys montanus	Plains Harvest Mouse					3
Sceloporus slevini	Slevin's Bunchgrass Lizard		S	S		2
Tantilla nigriceps	Plains Black-headed Snake					
Terrapene ornata luteola	Desert Box Turtle			S		
Thalasseus maximus	Royal Tern					

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Callipepla squamata	Scaled Quail					
Odocoileus hemionus	Mule Deer					
Patagioenas fasciata	Band-tailed Pigeon					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

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

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

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

Minimize 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.

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

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

For any powerlines built, proper design and construction of the transmission line is necessary to prevent or minimize risk of electrocution of raptors, owls, vultures, and golden or bald eagles, which are protected under state and federal laws. Limit project activities during the breeding season for birds, generally March through late August, depending on species in the local area (raptors breed in early February through May). Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during the nesting season. For underground powerlines, trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (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 (https://azstateparks.com/).

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

HDMS records indicate that **Chiricahua Leopard Frogs** have been documented within the vicinity of your project area. Please review the Chiricahua Leopard Frog Management Guidelines found at: https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/planningFor/wildlifeFriendlyGuidelines/FINALLithchirHabitatGdlns.pdf

Analysis indicates that your project is located in the vicinity of an identified Conservation Opportunity Area (COA). While there are many areas in Arizona that present abundant conservation opportunities, COAs are specific areas on the landscape that the Department identified as having the greatest potential for conservation efforts. COAs were identified using species and habitat data, the presence of unique landscape features, and Departmental expertise. COAs range in size, scope, and focal species and/or habitats and are strictly a non-regulatory conservation tool for the public and our conservation partners to consider. For more information regarding this particular COA near your project area and the Department's suggestions for potential conservation efforts, please visit the COA profile at https://awcs.azgfd.com/conservation-opportunity-areas.

The analysis has detected one or more **Important Bird Areas** within your project vicinity. Please see http://aziba.org/?page_id=38 for details about the Important Bird Area(s) identified in the report.

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

HDMS records indicate that **Western Burrowing Owls** have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at:
https://www.azgfd.com/wildlife/speciesofgreatestconservneed/burrowingowlmanagement/.

October 18, 2023

Ms. Hannah Alford
Korsail Energy
1415 Park Avenue West
Denver, Colorado 80205

Electronically submitted to hannah@korsail.com, don@korsail.com, JPippin@haleyaldrich.com

RE: Herbie Solar

Dear Ms. Alford:

The Arizona Game and Fish Department (Department) appreciates the opportunity to review the proposed Herbie Solar project and the information provided during the meeting on September 25, 2023. The Department understands that Korsail Energy proposes to construct a 120 MWdc photovoltaic (PV) solar facility and associated infrastructure in a 2200-acre project area on private lands near Willcox in Cochise County, Arizona. The facility will be located in primarily undeveloped semi-desert grassland and will interconnect to an existing transmission line just east of the project boundary. Current plans focus development in the northern part of the project area with the potential for expansion in the future.

Under Title 17 of the Arizona Revised Statutes, the Department, by and through the Arizona Game and Fish 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 recognizes the importance of planning efforts to develop renewable energy locations that contribute to regional and state economic growth needs and would like to work closely with Korsail Energy and Haley & Aldrich, Inc. during the planning and development of this facility. The Department recognizes that appropriate coordination, proper planning, and voluntary implementation of best management practices allow projects to be developed that avoid, minimize, or offset potential impacts to wildlife and recreational access during development and operation of the facilities. For your consideration, 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.

Arizona has recently seen an increase in the number of proposed and in-development renewable energy generation projects and associated infrastructure. A number of renewable energy projects have been built or proposed within the vicinity of this project. Although each of these projects individually may have a minimal impact on the broader landscape, these projects cumulatively could result in loss of habitat, impact wildlife movements, and affect wildlife-related recreation. Additionally, long-term effects to wildlife can extend several kilometers beyond the footprint of a solar project area (Sawyer et al. 2022[1]). It is important to consider all potential cumulative effects and to evaluate this project in association with other projects in the area. Department staff are available to assist in identifying potential cumulative impacts to wildlife and associated voluntary conservation measures that can be implemented for the project.

The proposed project is immediately adjacent to the Willcox Playa/Cochise Lakes Important Bird Area[2] (IBA). The Willcox Playa/Cochise Lakes area is of state and regional significance and serves as an important overwintering ground for sandhill cranes and other avian species, including several shorebirds. Sandhill cranes are present on the playa between October and March and fly between roosting and feeding sites several times a day. As discussed during the meeting, the Department has concerns regarding the potential for bird fatalities or injuries (i.e., bird strikes) if avian species mistake the solar panels for open water. Large-scale solar photovoltaic facilities can result in bird mortality due to habitat loss, collision with panels, attraction due to an optical illusion of water, and unknown causes (Kosciuch et al. 2020[3]). The Department appreciates Korsail's interest in exploring conservation measures that aim to reduce potential impacts to cranes and other avian species, such as the following:

- The Department understands that Korsail plans to use solar panels with non-reflective coatings, which can reduce the appearance of the array as a body of water and reduce attraction of birds to the site.
- To the extent feasible, the Department recommends maximizing the spacing between solar panels to reduce the "lake effect," in which continuous or closely-spaced panel arrays create an optical illusion of water. The Department understands that Korsail plans to maintain a minimum of 24 feet spacing between the panels.
- The Department encourages the use of both bird diverters and near-ultraviolet light Avian Collision Avoidance Systems (ACAS) on any new powerlines needed for this project. New powerlines in this area may pose a risk of collision and mortality for cranes and other large birds. Providing a combination of bird diverters (or floppy tags), which are useful in daytime/full light scenarios, and near-ultraviolet ACAS, which are useful in nighttime/low light scenarios, can reduce the occurrence of crane strikes (Dwyer et al. 2019[4]). The Department also recommends following standards established by the Avian Power Line Interaction Committee (APLIC), which can be found in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*[5] and *Reduced Avian*

[1] https://esajournals.onlinelibrary.wiley.com/doi/10.1002/fee.2498
[2] https://aziba.org/?page_id=712
[3] https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0232034
[4] https://www.researchgate.net/publication/333903783_Near-ultraviolet_light_reduced_Sandhill_Crane_collisions_with_a_power_line_by_98
[5] https://www.aplic.org/uploads/files/2643/SuggestedPractices2006(LR-2).pdf

Collisions with Power Lines: The State of the Art in 2012[6]. Tuk Jacobson, the Department's Raptor Coordinator, can provide further information on specific design features and best management practices; he can be contacted at raptors@azgfd.gov or 623-236-7575.

- As discussed, the Department encourages Korsail to implement post-construction monitoring for avian injuries and fatalities. Recommendations for monitoring design and frequency can be found in the U.S. Geological Survey's 2016 Mortality Monitoring Design for Utility-Scale Solar Power Facilities[7]. Any avian injuries or fatalities should be reported both to the Department and by using the U.S. Fish and Wildlife Service's Injury and Mortality Reporting[8] website. Department staff are available to assist in developing the monitoring protocol and to further refine the monitoring and reporting recommendations in order to develop feasible and repeatable protocols to be implemented during operations. The Department is also available to help determine adaptive management measures based on results of the post-construction monitoring. For example, the U.S. Geological Survey has been conducting research that indicates birds are most attracted to solar arrays around midday, and tilting of panels during key times of strikes could reduce bird attraction.

The Department appreciates that site visits were conducted in August 2023 to categorize habitats and document potential species presence. Based on the information provided, the Department offers the following recommendations to reduce potential impacts to wildlife and habitat; additional information can be found in *Guidelines for Solar Development in Arizona*[9]:

- The western burrowing owl, a special status species that is regulated under the Migratory Bird Treaty Act (MBTA), has the potential to occur in the project area. The Department recommends conducting occupancy surveys for this species in advance of the design phase to understand distribution of burrowing owls in the project site; avoidance of a large burrowing owl population may be advisable over removal or other conservation measures. Guidelines for conducting this survey are found in *Burrowing Owl Project Clearance Guidance for Landowners*[10]. Please note that the survey should be conducted by a surveyor who is certified by the Department or has similar training and qualifications. If an active burrowing owl burrow is detected, please contact the Department and the U.S. Fish and Wildlife Service[11] (USFWS) for direction, in accordance with the guidelines.
- The Department recommends conducting additional avian surveys during the planning stage in order to better understand species presence and to inform potential conservation measures. Point counts are the preferred method for breeding bird surveys. These surveys are conducted twice a year during the peak breeding season, which is generally

[6] https://www.aplic.org/uploads/files/15518/Reducing_Avian_Collisions_2012watermarkLR.pdf
[7] https://pubs.usgs.gov/of/2016/1087/ofr20161087.pdf
[8] https://ecos.fws.gov/imr/welcome
[9] https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/planningFor/wildlifeFriendlyGuidelines/FinalSolarGuidelines03122010.pdf
[10] https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/nongame/eagles/BurrowingOwlClearanceProtocol_2009.pdf
[11] https://www.fws.gov/office/arizona-ecological-services/contact-us

mid-February through late September in this area; McLaren et al. (2019)[12] outline protocols. As discussed, additional surveys for Bendire's thrashers, a bird species of conservation concern that was documented during the site visits, are recommended; a draft protocol[13] from the Desert Thrashers Working Group is available online.

- The Department recommends conducting surveys for nesting birds prior to vegetation removal and/or construction activities that occur during the breeding season. The vegetation within the project area may provide nesting opportunities for avian species that are regulated under the Migratory Bird Treaty Act (MBTA). If it is anticipated the project will not be in compliance with MBTA, the Department recommends contacting the USFWS for technical assistance.
- Burrowing species could occur within the project area and could be influenced by construction activities and by loss of habitat. Surveys for these species are recommended to determine their presence and to inform pre-construction activities. Department staff are available to assist in identifying suitable conservation measures, such as one-way exclosures on burrows that allow wildlife to exit the burrows and disperse to adjacent lands in advance of construction.
- A variety of other Arizona Species of Greatest Conservation Need (SGCN) have the potential to occur within the project area. If wildlife are encountered during project activities, the Department recommends moving them out of harm's way, no more than 0.25 mile outside the project boundary within similar habitat. Please note that the Arizona State Wildlife Action Plan was recently updated, and the Department has an interactive website, Arizona Wildlife Conservation Strategy[14], that includes the most recent list of SGCN to help navigate and identify conservation opportunities.

Maintaining habitat connectivity is a priority for the Department, and wildlife movement corridors are important for wildlife to respond to changing environmental conditions. The landscape in which this project is proposed provides important movement pathways for wildlife. As discussed, the Department would like to work with Korsail on opportunities to incorporate wildlife connectivity into the project design, including the following:

- The Department recommends incorporating open unfenced corridors across the project area into the project design to facilitate wildlife movement and is available to help determine appropriate placement and design.
- The Department recommends conducting minimal grading in the project area and, to the extent possible, retaining habitat features underneath the panels, including vegetation and soils. The topography in the majority of the site is flat and would require minimal trimming of shrubs and existing vegetation to install the panels. Keeping the existing soil and root structures intact would serve to minimize erosional run-off and help reduce biodiversity loss within the site (Grodsky and Hernandez 2020[15]).

[12] https://www.birdconservancy.org/wp-content/uploads/2021/03/2020-Field-Protocol-for-Spatially-Balanced-Sampling.pdf
[13] https://drive.google.com/drive/folders/1d9L8Su0HPbBzo2oGSH4H2xqrwOqHpT1o?usp=sharing
[14] https://awcs.azgfd.com
[15] https://www.nature.com/articles/s41893-020-0574-x

- The Department's *Wildlife Compatible Fencing Guidelines*[16] provide information on how fencing impacts wildlife, ways to design fencing to prevent wildlife entanglement and impalement, and to ensure wildlife movement is not restricted. Department personnel are available as resources to help determine appropriate fencing design and layout that will achieve its objective while reducing impact on wildlife, such as leaving a 6–8-inch gap between the ground surface and bottom of the fence to allow for smaller wildlife species to move freely through the area and make use of any habitat within the project boundary.

Finally, the Department offers the following general recommendations to reduce potential impacts to wildlife and habitat during construction and operation of the facility:

- Because proposed ground disturbance will exceed 0.25 acres in areas with native vegetation, please ensure the project complies with Arizona Native Plant Law[17] regulations. A Native Plant Inventory may need to be conducted to identify, record, and coordinate plant salvage efforts for species that are Protected under the Arizona Native Plant Law.
- To minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects, and pathogens, the Department encourages taking precautions to wash and/or decontaminate equipment before entering and leaving the site. See the Arizona Department of Agriculture website[18] for a list of prohibited and restricted noxious weeds and the Arizona Native Plant Society[19] for recommendations on how to control them. To view a list of documented invasive species or to report invasive species in or near the project area, visit iMapInvasives[20], which is a national cloud-based application for tracking and managing invasive species.
- If trenching or digging of large holes is necessary, the Department recommends trenching/digging and backfilling crews be close together to minimize the amount of open holes at any given time. Where trenches or holes cannot be back-filled immediately, the Department recommends escape ramps be constructed in each hole and at least every 90 meters in trenches. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The Department recommends that slopes be less than 45 degrees (1:1) and trenches and holes that have been left open be inspected to remove animals prior to backfilling.
- The Department recommends revegetating disturbed areas with native drought-tolerant species that represent the natural surrounding landscape. Landscaping with native plants can help support wildlife and pollinator species in the area while reducing dust and erosion. In addition, the applicable land management agencies should be consulted regarding guidelines for revegetation efforts.
- Artificial lighting could impair the ability of nocturnal animals to navigate (e.g., owls, migratory birds, bats, and other nocturnal mammals) and may affect wildlife behavior

[16] https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/planningFor/wildlifeFriendlyGuidelines/110125_AGFD_fencing_guidelines.pdf
[17] https://agriculture.az.gov/plantsproduce/native-plants
[18] https://agriculture.az.gov/pestspest-control/agriculture-pests/noxious-weeds
[19] https://aznps.com/invas
[20] https://imap.natureserve.org/imap/services/page/map.html

and populations (Davies et. al. 2013[21]). The Department recommends using only the minimum amount of light needed for safety. If feasible, narrow spectrum lighting is wildlife-friendly and should be used as often as possible to minimize the number of species affected by lighting. It is also beneficial that all lighting is shielded, canted, or cut to minimize the amount of upward shining light.

Thank you for the opportunity to provide input on the Herbie Solar project. 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: Ginger Ritter – Project Evaluation Program Supervisor
Raul Vega – Regional Supervisor, Region V
Laura Paulson – Habitat, Evaluation, and Lands Program Manager, Region 5

AZGFD #M23-09213106

[21] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3657119

APPENDIX E
Decommissioning Plan

Herbie Solar Project
Decommissioning Plan

1. Purpose

Herbie Solar LLC (Herbie) proposes to develop, construct, and operate an 80MWac, 120MWdc photovoltaic (PV) solar generating facility coupled with a 20MW/80MWh Battery Energy Storage System (the Project). This Decommissioning Plan is provided by Herbie and will detail the projected decommissioning demands associated with the Project.

The purpose of this decommissioning plan is to provide procedures and an opinion of probable construction cost for partial or full closure of the Project. Cochise County Code requires a Decommissioning Plan and performance guarantees to supplement plans submitted as part of the Special Use permit package. This decommissioning plan details provisions for Project deconstruction and restoration, to satisfy the specific guidelines set forth in the Project's Special Use permit. This Decommissioning Plan shall take effect upon Project abandonment, discontinuation of operation, or expiration of the Special Use permit as defined by Cochise County Code.

2. Project Location

Herbie proposes to develop, construct and operate the Project on approximately 530 acres near the City of Willcox, Cochise County, Arizona (Project Area). The Project Area currently consists of private, undeveloped rangeland in unincorporated Cochise County within portions of tax parcels 203-16-005, 203-16-059, 203-16-061, 203-16-063, 203-16-064, 203-16-067, and 203-16-068.

3. Anticipated Service Life of the Project

Unless the Project is purchased by Cochise County or another entity, the Project shall be decommissioned in accordance with this Decommissioning Plan, restoring the Project Area to as close to its agreed-upon post-decommissioned state as practicably possible upon expiration or termination of the Power Purchase Agreement. The Project will have a maturity date of twenty (20) years but carries an expected useful lifetime of more than 50 years.

Decommissioning responsibilities include the removal of the following: any perimeter fences, any concrete or steel foundations, all metal structures (mounting racks and trackers), all photovoltaic (PV) modules, pipelines, alternators, generators, aboveground and underground cables, transformers, inverters, fans, switch boxes, fixtures, BESS batteries and shells, and otherwise restoring the premises to its original condition or mutually agreed upon state. Other Decommissioning Plan activities include the management of materials and waste, projected costs, and a decommissioning fund agreement overview.

4. Decommissioning Risk Over the Lifecycle of a Project

The probability of an event that would lead to abandonment or long-term interruption is extremely low during the first 15 to 20 years of the Project life. Accordingly, the risk of decommissioning the Project is extremely low during this time frame. Reasons for this include, but are not limited to:

- Project owners have sophisticated financing structures that allow the lender or tax equity partner to step in and rectify the event that may lead to abandonment.
- Most critical solar components have original equipment manufacturer (OEM) warranties with terms exceeding five years that include labor and parts. A warranty is an agreement or guarantee outlined by a manufacturer to a customer that defines performance requirements for a product or service. Warranties give customers a form of insurance if the purchased product or service does not adhere to quality standards. These warranties assure the Project owner, financing parties, and other stakeholders, that equipment will perform as expected which minimizes the risk of a decommissioning event. Average warranty lengths for critical solar components range from 5 to 10 years, with production warranties on solar panels extending to 20 to 25 years.
- Solar projects consist of many networked components designed to convert solar radiation into electrical energy. The failure of any single component will not result in a substantial reduction of energy generation that could lead to a decommissioning event.
- Solar projects are required to maintain replacement value property damage insurance coverage and business interruption insurance coverage. Business interruption insurance covers the loss of income that a business suffers after a disaster or equipment failure. Typical solar business interruption insurance covers income loss for twelve months from the date of the event triggering the loss.
- The replacement costs of solar components will typically decline over time, and accordingly, costs to replace failed or damaged equipment after lapsed OEM warranties will not create large financial hurdles for the Project.
- In the early stages of the Project, the resale value of the equipment is significantly higher than the decommissioning costs, resulting in a net positive (revenue).

Solar power is an increasingly popular form of renewable energy around the world and as an alternative to the burning of fossil fuels, solar ranks alongside wind and hydropower as essential energy options for the future of the planet. Solar also offers the additional benefit of being easier to build, operate, and decommission with minimal environmental risks. Recent rises in popularity and use can be linked to lower installation and operation costs and it is expected that this pattern will continue, further reducing the risk of a decommissioning event.

5. Decommissioning Risks Over Time

As noted above, the probability of a decommissioning event that would lead to abandonment or long-term financial interruption is extremely low during the first 15 to 20 years of the Project life and accordingly, the financial risk to decommission the Project is also extremely low. A risk analysis approach is presented here for informational purposes only and has not been considered in the decommissioning cost estimates present in this Decommissioning Plan.

It is important to note that there are two aspects to consider when evaluating the risk for decommissioning the Project:

1. The risk of the need to decommission the Project as a whole (Project termination risk), and
2. The risk of failing to recuperate the cost of the decommissioning activities (decommissioning funding).

The most important concern for Cochise County is the ability to recuperate the cost of decommissioning and restoration of the land to pre-Project conditions. The presence of a Power Purchase Agreement (PPA) in the first 20 years of the Project makes the likelihood of decommissioning very low during that time. The graph below summarizes the estimated decommissioning risk of cost recovery for the Project. The graph utilizes a "one percent" risk as the lowest risk; however, the financial value of the Project or equipment in the early years would far exceed the cost of the decommissioning and restoration activities and therefore, the graph is conservative.

The factors taken into consideration in estimating the risk include, but were not limited to:

- Years 1-5 – Minimal Project termination or financial risk due to presence of PPA with guarantee to purchase power, resale of value components, component warranties, value of Project.
- Years 5-10 – Similar consideration of previous period, except minimal increased financial risk due to the decrease in resale value of used components and rise in technological improvements of new equipment in market.
- Years 10-15 – Similar consideration of previous period, with slightly increased risk as warranties start to expire. Value of equipment is still substantial but decreasing.
- Years 15-20 – Similar consideration of previous period, warranties continue to expire; value of equipment diminishes with age and technological improvements in market.
- Years 20-25 – PPA expires, Project termination and funding risks increase, value of equipment diminishes, and technological improvements in market. A rise in salvage value of removed equipment due to diminishing natural resources and improvements in the efficiency of recycling/extraction technologies will offset the cost of decommissioning.

6. Commencement of Decommissioning

This Decommissioning Plan assumes that the Project will be decommissioned under any of the following conditions:

1. The land lease (including the exercise of any extension options) ends and will either not be renewed, or a new lease will not be entered into for the Project.
2. The system does not produce power for sale for a consecutive 12-month period, except in the instance of a force majeure event in which the Project is being repaired and/or restored.
3. The Project is damaged and will not be repaired or replaced.

7. Removal of Nonutility Owned Equipment

The Project decommissioning will include at a minimum:

- Disconnection from the utility power grid.
- Removal of all Project components: panels, inverters, wire, cable, combiner boxes, transformers, racks, trackers, tracker motors, weather monitoring, control system apparatus, BESS batteries and shells, etc.
- Removal of all non-utility owned equipment (at point of interconnection), conduits, structures, fencing, and foundations to a depth of at least three feet below grade.
- Restoration of Project Area to a condition reasonably similar to its condition prior to Project installation, or as initially agreed upon.
- Plant vegetation suitable for the location, native to the region, and which matches surrounding vegetation.

The owner of the leased property may request in writing for certain items to remain, e.g., access roads.

This Decommissioning Plan is based on current best management practices and procedures and may be subject to revision based on new standards and emergent best management practices at the time of decommissioning. Permits will be obtained as required and notification will be given to necessary stakeholders prior to decommissioning.

The decommissioning process will maximize the recycling, reuse and salvage of applicable Project components, which are outlined in the opinion of probable construction costs. Based on the extent of decommissioning, prior to beginning construction activities, the developer will submit applicable demolition and construction plans and permit applications which will outline the schedule and extents of demolition. Decommissioning activities will not begin prior to issuance of approved permits by local regulatory agencies with appropriate jurisdiction.

8. Restoration of Project Area

To adequately restore the Project Area to its previous condition, documentation using pre-construction video and/or digital photography will be performed prior to construction activities. This information will be reviewed prior to preparation of decommissioning demolition documents and included in the submittal

to the County. Pre-construction documentation will also consist of detailed descriptions of existing vegetative and soil conditions as well as existing topography and drainage patterns.

At the time of decommissioning, Herbie will restore the Project to a desert/scrub shrub-like condition. All waste and excess materials will be disposed of in accordance with municipal, state, and federal regulations. Waste that can be recycled under municipal programs will be recycled accordingly. However, Herbie shall not be required to replace any structures that were removed to build the Project.

The restoration will consist of de-compaction of the topsoil by disking or tilling and re-vegetation of the Project Area. Mass grading is not anticipated since the initial Project will not alter topography significantly. Herbie will provide dust control during Project Area restoration. The Project Area will be seeded with native vegetation and fertilized as needed to return the Project Area to as close as practicable to original or initially agreed-upon condition. The future use of the Project Area will be determined at the time of decommissioning. Deciding factors will be influenced by Cochise County land use and comprehensive plans and regulations at such time in the future.

Herbie will coordinate with Cochise County to monitor vegetation and drainage following restoration until permanent vegetation is established. Erosion and sediment control, re-seeding, soil stabilization, weed control and fertilization will be provided by Herbie as needed until the Project Area is stabilized and approved complete by Cochise County.

Upon completion of the restoration, a final report of activities will be submitted to Cochise County documenting the process and results.

9. Time Period to Complete Decommissioning

Herbie will have 12 months from the date decommissioning commences to complete decommissioning. Provided, however, Herbie shall be able to request an extension of an additional six months if it is in good faith diligently decommissioning and is delayed due to weather conditions or other items outside its control.

10. Party Responsible for Decommissioning

Herbie is responsible for this decommissioning, provided however that Herbie may contract with a third-party to perform the decommissioning on its behalf. Nothing in this plan relieves any obligation that the real estate property owner may have to remove the Project as outlined in the Special Use permit in the event Herbie does not fulfill this obligation.

11. Decommissioning Cost Estimate and Bonding

An engineer's opinion of probable construction cost and analysis of material salvage value were prepared as part of this decommissioning plan. Exhibit A summarizes the probable costs and salvage values associated with decommissioning. Exhibit B summarizes probable costs associated with decommissioning exclusive of salvage values. Exhibit C summarizes probable costs associated with trucking panels to approved recycling facilities.

Cochise County Code requires Herbie Solar LLC to provide a faithful performance bond as a financial guarantee for proper decommissioning. This bond is separate from, and in addition to, performance bonding submitted for permitting. Furthermore, Herbie Solar LLC will be required to submit detailed engineering plans at the time of decommissioning, and obtain construction permits as required by appropriate authorities.

Expenses associated with decommissioning the Project will be dependent on labor costs at the time of decommissioning. For the purposes of this report, current RSMeans data was used to estimate labor, material, and equipment expenses. Fluctuation and inflation of the labor costs were not factored into the estimates.

Total probable cost of decommissioning in Year 5 is estimated to be **$3,852,601.54**.

12. Resale/Salvage Value Estimate

There is a robust secondary market for resale of solar PV panels worldwide and a network of facilities available for recycling panels. Solar PV panels are estimated to degrade less than 0.5% per year, meaning they're expected to operate at 90% of capacity after 20 years. Panel manufacturers will guarantee the performance for each individual module and replace defective modules per the terms of warranty. Panels can therefore be sold for a price higher than their scrap value.

In general, the highest component value would be expected at the time of construction with declining value over the life of the Project. Over most of the Project's life, components such as the solar panels could be sold in the wholesale market for reuse or refurbishment. As panel efficiency and power production decrease due to aging and/or weathering, the resale value will decline accordingly. Secondary markets for used solar components include other utility scale solar facilities with similar designs that may require replacement equipment due to damage or normal wear over time, and other buyers (e.g., developers, consumers) that are willing to accept a slightly lower power output in return for a significantly lower price point when compared to new equipment.

The Project's additional supporting components, such as inverters, transformers, racking and piles, can be dismantled and resold for scrap value. Inverters and transformers are comprised of salvageable materials such as copper, aluminum, and silver. Piles and other steel components can likewise be recovered and salvaged. Resale values at the end of Year 5 for equipment of significant value were calculated with straight-line depreciation after an instant depreciation of the original material cost.

A current sampling of reused solar panels indicates a wide range of pricing depending on age and condition ($0.10 to $0.50 per watt). Future pricing of solar panels is difficult to predict currently, due to the relatively young age of the market, changes to solar panel technology, and the ever-increasing product demand. A conservative estimation of the value of solar panels in Year 5 at $0.18 per watt would yield approximately $17,507,319.22. Increased costs of removal, for resale versus salvage, would be expected to preserve the integrity of the panels; however, the net revenue would still be substantially higher than the estimated salvage value. The resale value of components such as trackers, may decline more quickly; however, the salvage value of the steel that makes up a larger portion of the tracker is expected to stay at or above the value used in this report.

The price used to value the steel in this report is $186 per ton. The price used to value copper in this report is $3.01 per lb.

No salvage value is anticipated for the battery energy storage system components.

Total probable salvage value of decommissioning in Year 5 is estimated to be $19,191,067.62.

EXHIBIT A

Herbie Solar
Cochise County
Decommissioning Estimate Pro Forma w/ Salvage

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs. LS = Lump Sum, HR = Hours, EA = Each, LF = Linear Feet.

Item	Quantity	Unit	Unit Price	Total Salvage	Total Price (incl. markups)	Total Price
Mobilization	1	LS		$ -	$178,810.00	($ 178,810.00)
Supervision	210	HR	$78.00	$ -	$16,380.00	($ 16,380.00)
Temporary Facilities	1	LS		$ -	$20,590.00	($ 20,590.00)
Safety	1	LS		$ -	$13,950.00	($ 13,950.00)
Legal Expenses	1	LS		$ -	$3,660.00	($ 3,660.00)
General Liability Insurance	1	LS		$ -	$14,940.00	($ 14,940.00)
Contractor's G&A	1	LS		$ -	$28,220.00	($ 28,220.00)
SWPPP, Erosion Control Measures (Disturbed Area)	888	Ac	$670.00	$ -	$594,752.30	($ 594,752.30)
Seeding	50	Ac	$2,018.26	$ -	$100,913.20	($ 100,913.20)
Tilling 6" topsoil/scarifying access road and rough grading existing soil	18	Ac	$2,241.45	$ -	$40,121.96	($ 40,121.96)
Remove and Recycle Chainlink Fence	31,420	LF	$4.39	$ 15,835.63	$138,011.79	($ 122,176.16)
Disconnection and Demolition of Switchyard/Substation Equipment	1	EA	$187,804.25	$ 37,560.85	$187,804.25	($ 150,243.40)
Remove and Recycle AC Cables	49,627	LF	$2.45	$ 7,468.85	$121,619.35	($ 114,150.51)
Remove and Recycle DC Cables	2,041,484	LF	$0.20	$ 307,243.41	$409,820.66	($ 102,577.25)
Backfill AC and DC trenches	1,001,940	LF	$0.33	$ -	$329,566.71	($ 329,566.71)
Remove and Recycle Inverters/Transformers	31	EA	$330.18	$ 167,400.00	$10,235.58	$ 157,164.42
Remove and Recycle Photovoltaic Modules	277,472	EA	$3.40	$ 17,507,319.22	$943,404.80	$ 16,563,914.42
Remove and Recycle Piles	43,566	EA	$4.44	$ 453,783.46	$193,433.04	$ 260,350.42
Remove and Recycle Support Assemblies	7,716,180	LB	$0.03	$ 694,456.20	$249,771.62	$ 444,684.58
Remove and Recycle BESS Batteries	48	EA	$1,130.76	$ -	$54,276.70	$ 54,276.70
Remove and Recycle BESS Shells	960	EA	$203.46	$ -	$195,319.58	$ 195,319.58
Contaminated Soils Testing	1	LS		$ -	$2,000.00	($ 2,000.00)
Reclamation Monitoring and Maintenance	1	LS		$ -	$5,000.00	($ 5,000.00)
			Total:	**$ 19,191,067.62**	**$3,852,601.54**	**$ 15,837,658.62**

Notes:
1. A site of similar size was used to derive potential quantities for erosion and sediment control (scaling from 36 MW to 100 MW).
2. Labor productivity and unit rates were derived from RSMeans Online (Heavy Construction, 2023 data).
3. Material salvage values were based off of current US salvage exchange rates.
4. Equipment rental rates determined from RSMeans and/or local rental facilities.
5. Photovoltaic Module material salvage rate is based on straight-line depreciation of modules (-0.5% per year).
6. For PV Module Removal/Recycle labor and equipment costs are computed at present values, while salvage value is computed at
7. Material salvage values were determined using the most prevalent salvageable metal in each component. Copper Wire @$0.15/LF (AC and DC Cables) and Steel @8.50/LF of fence, @$0.65/pile, and @$0.09/LB.
9. Inverter resale value is dependent on the assumption that all inverters will be decommissioned and resold half way through their useful life (every 5 years).

EXHIBIT B

Herbie Solar
Cochise County
Decommissioning Estimate Pro Forma w/o Salvage

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs. LS = Lump Sum, HR = Hours, EA = Each, LF = Linear Feet.

Item	Quantity	Unit	Unit Price	Total Price
Mobilization	1	LS		$178,810.00
Supervision	210	HR	$78.00	$16,380.00
Temporary Facilities	1	LS		$20,590.00
Safety	1	LS		$13,950.00
Legal Expenses	1	LS		$3,660.00
General Liability Insurance	1	LS		$14,940.00
Contractor's G&A	1	LS		$28,220.00
SWPPP, Erosion Control Measures (Disturbed Area)	888	Ac	$670.00	$594,752.30
Seeding	50	Ac	$2,018.26	$100,913.20
Tilling 6" topsoil/scarifying access road and rough grading existing soil	18	Ac	$2,241.45	$40,121.96
Remove and Recycle Chainlink Fence	31,420	LF	$4.39	$138,011.79
Disconnection and Demolition of Switchyard/Substation Equipment	1	EA	$187,804.25	$187,804.25
Remove and Recycle AC Cables	49,627	LF	$2.45	$121,619.35
Remove and Recycle DC Cables	2,041,484	LF	$0.20	$409,820.66
Backfill AC and DC trenches	1,001,940	LF	$0.33	$329,566.71
Remove and Recycle Inverters/Transformers	31	EA	$330.18	$10,235.58
Remove and Recycle Photovoltaic Modules	277,472	EA	$3.40	$943,404.80
Remove and Recycle Piles	43,566	EA	$4.44	$193,433.04
Remove and Recycle Support Assemblies	7,716,180	LB	$0.03	$249,771.62
Remove and Recycle BESS Batteries	48	EA	$1,130.76	$54,276.70
Remove and Recycle BESS Shells	960	EA	$203.46	$195,319.58
Contaminated Soils Testing	1	LS		$2,000.00
Reclamation Monitoring and Maintenance	1	LS		$5,000.00
			Total:	$3,852,601.54

Notes:

1. A site of similar size was used to derive potential quantities for erosion and sediment control (scaling from 36 MW to 100 MW). Quantities were determined by comparing "unit/MW" quantities directly.
2. Labor productivity and unit rates were derived from RSMeans Online (Heavy Construction, 2023 data).
3. Equipment rental rates determined from RSMeans and/or local rental facilities.

EXHIBIT C

Herbie Solar
Cochise County
Panel Trucking Costs

$/mo/truck rental	$	4,000
$/mo/truck labor (FT+benefits)*	$	5,000
$/mo/truck maintenance	$	500
$/mo/truck insurance	$	1,000
Total $/mo/truck cost	$	10,500.00
$/gallon gas	$	4.50
miles /gallon		8
Mileage roundtrip		388
Total fuel cost per trip	$	218.25
Capacity in tons per trip		20
total number of panels		277,472
panel weight (tons)		8,324
Misc. Waste (tons)		20
Total trips		418
Loading/unloading hours per trip		1
road hours per trip		6.5
hours per day		10
days/month		21
trips per month per truck		28.0
Total truck months		15
Subtotal of Truck and Labor Cost	$	157,500
Fuel Cost	$	91,229
Total Trucking Cost	**$**	**248,729**

*Assumes truck labor only works half of the month at standard heavy truck operator rates

Herbie Solar
Cochise County
Battery Pack Trucking Costs

$/mo/truck rental	$	4,000
$/mo/truck labor (FT+benefits)*	$	5,000
$/mo/truck maintenance	$	500
$/mo/truck insurance	$	1,000
Total $/mo/truck cost	$	10,500.00
$/gallon gas	$	4.50
miles /gallon		8
Mileage roundtrip		388
Total fuel cost per trip	$	218.25
Capacity in tons per trip		20
total number of megapacks		48
pack weight (tons)		960
Misc. Waste (tons)		20
Total trips		49
Loading/unloading hours per trip		1
road hours per trip		6.5
hours per day		10
days/month		21
trips per month per truck		28
Total truck months		2
Subtotal of Truck and Labor Cost	$	21,000
Fuel Cost	$	10,694
Total Trucking Cost	**$**	**31,694**

*Assumes truck labor only works half of the month at standard heavy truck operator rates