COCHISE COUNTY
Arizona

Special Use Application

Development Services
520-432-9300
developmentservices@cochise.az.gov
www.cochise.az.gov
1415 Melody Ln, Bdg F
Bisbee, Arizona 85603

Special Uses are activities or uses that, because of their unique characteristics, potentially could generate greater impacts than uses permitted in a zoning district. Due to these greater impacts, special uses are not granted administratively. Rather, they must be reviewed and approved by the Planning and Zoning Commission at a public hearing.

Applicant Info

Name:	Horus Energy AZ 1 LLC
Address:	16730 Creek Bend Drive, Sugar Land, TX 77478
Phone:	(209) 683-3339 (Mr. Georgi Velkov - Applicant contact), (520) 206-9585 (Ms. Diana Sandoval - Agent contact)
Email:	georgi.velkov@horuscapital.co.uk, dsandoval@westlandresources.com

Describe your relationship to this application (select one):

☐ Property owner (skip next question) ☑ Authorized agent

By typing their name below, the undersigned, registered property owner of the property subject to this application, hereby grants the authorized agent noted above to act on their behalf and take all actions necessary for the processing, issuance and acceptance of this permit or application.

Signature: **See Attachment 1, follows SUP Form.** Date:

Property Info

Property Owner Name(s):	AURUM HOLDINGS INC & TOENIES MARK M & LYMY BETH D
Parcel Number (APN):	407-18-003 & 407-17-001; **see Attachment 2, Note 1**
Parcel Size (in acreage or square feet):	APN: 40717001: 323.867 ACRES±, APN: 40718003: 272.728 ACRES± (Total: 596.595 ACRES±)
Parcel Zoning Designation:	RU-4

Processing Fees

$500 + ($20/acre, ($2,000 acreage fee max)) Checks are payable to the Cochise County Treasurer.

Required Submittals

- [x] This application (see Attachments 1 through 5) (Attachment 6 [Supporting Documents uploaded as separate file])
- [x] A concept plan (Attachment 4 [uploaded as separate file])
- [x] Letter of authorization (for authorized agents, if applicable) (Attachment 3a & 3b)
- [x] A non-refundable processing fee

Project Info

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	Utility Company/Service Provider
Water/Well	Onsite private well will be used for construction and panel cleaning; applicant will file NOI (ADWR) if new well is needed
Sewer/Septic*	Not applicable
Electricity	Arizona Public Service (APS)
Fire Protection	Outside fire district boundaries, Emergency Response Plan will be prepared
Waste Disposal	Trash will be removed from site by contractors as it is generated

* If the property is, or will be, served by a septic system, indicate the location of the septic system and the 100% expansion area on the site plan. State whether the system is existing or proposed.

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
- [x] N/A, no deed restrictions

Supplemental Questions

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

See Attachment 2, Note 2.

2. Describe all **existing** structures/uses present on the subject property. Note: Show the location and size of existing structures on the accompanying site plan.

An ALTA land survey is provided as Attachment 5 clearly depicting all existing structures/uses at the Project site: fencing around the perimeter of the Project site and at the northeast corner of the western parcel; a pond at the northeast corner of the eastern parcel; well sites with associated concrete pads, valves and electric meters; overhead power lines, guy wires and poles; and survey markers.

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

The Project will be composed of rows of solar modules mounted on racking equipment. Racking equipment sits on top of steel piles driven directly into the ground. Solar modules are connected to photo voltaic inverters using conductors and safety disconnect boxes. The output from each transformer is collected using conductors which carry the power to the Project substation where power is stepped up to transmission voltage, using the main power transformer before interconnecting to the APS system. The Project will also include fencing, and an operations and maintenance facility. See Attachment 4.

4. 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).

Buildings/modulars are expected to be composed of prefabricated metal buildings or shipping containers. These will be used during operations and maintenance for informal field offices and/or storage of spare parts and equipment.

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

☑ One year ☐ Phased (Between 12-18 months as one phase)

Supplemental Questions Continued

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

6. 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 Agreement (PPA) with an investor-owned utility company (APS).

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

Everyday, during daylight hours

8. What are the number of employees expected to work onsite?

Initially: 150 Future: 2-4

9. Describe the permanent legal access to the property. State which streets or easement will be used by traffic to enter or exit the property. Specify whether the vehicular access is from a public road, private road, or easement, and label all legal access on the concept plan.

See Attachment 2, Note 3.

10. What impact will this have on the traffic volume of roads that serve the subject property?

See Attachment 2, Note 4.

10.a. Number of passenger vehicles entering and leaving the site (per day/week)?

See Attachment 2, Note 5.

10.b. Number of large trucks entering and leaving the site (per day/week)?

See Attachment 2, Note 5.

Supplemental Questions Continued

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

See Attachment 2, Note 4.

11. 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.

Driveway cuts will be proposed along Central Highway, on each side of the roadway to access the western and eastern parcels. There are no driveway cuts that require relocation.

12. What is your water source? If your property is served by a private well, show the existing or proposed location of the well on the site plan.

There are existing private wells at the northeast corner of each parcel. See Attachments 4 and 5.

13. Total gallons of water needed for the proposed use, either daily or anually:

See Attachment 2, Note 6.

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

Water consumption is not necessary to generate electricity from solar panels. Module washing will be periodically necessary to maintain solar panel productivity. The Project site avoids natural drainages and flood areas and will allow for continued onsite and offsite conveyance and natural recharge, as applicable. There are impoundments that control stormwater on the Project site which we presently plan to keep intact.

15. Describe your citizen review process. 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 Applicant sent a notice to community stakeholders and residents within 1,500 ft of the Project site, hosted an open house for the Project and followed up with residents who provided email and telephone contact information. To date, one written comment in support of the Project was provided. The Citizen Review Report summarizes verbal comments and responses from calls and the open house meeting. Due to feedback, the Applicant intends to locate access for the Project site from Central Highway, rather than Prince Road; considered special project configurations to avoid mature vegetation and vegetation removal/trimming options; and incorporated several environmental conservation measures based on coordination with the Arizona Game and Fish Department. See Attachment 6 for details.

Supplemental Questions Continued

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

The Project will be constructed and operated outdoors.

17. 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. A small on-site operations and maintenance facility that will be used to store spare parts and maintenance equipment. This is proposed at the planned substation (SE corner of western parcel). Given the absence of neighbors at this location, the Applicant is not proposing to screen these areas.

18. 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.

19. 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.

Supplemental Questions Continued

20. Will any on-site activities attract pests, such as flies or mice? If yes, what measures will be taken to mitigate/discourage their presence?

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

21. 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?

See Attachment 2, Note 7.

22. 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 See Attachment 2, Note 8.

23. Do you anticipate the need to clear more than one acre of vegetation? If so, describe the proposed dust and erosion control measures to be used and show their approximate location on site plan, if appropriate. Also, indicate if any drainage pattern alterations are proposed or necessary.

See Attachment 2, Note 8.

By typing their name below, the applicant certifies that they are the authorized owner's agent and all information in this questionnaire, in the Joint Permit Application and on the site plan is accurate. They understand that if any information is false, it may be grounds for revocation of this permit. In addition,they hereby request all inspections necessary to process this application, and if the permit is issued, they request all inspections necessary to monitor progress, and document completion, at all stages of the work related to this permit.

Signature: Diana Sandoval Date: 4/25/24

FOR STAFF	
Permit Number:	
Date Received:	Date Finalized:
Reviewed By:	

Attachment 1
Horus Agent Designation Letter

April 23, 2024

COCHISE COUNTY
Planning and Zoning Division
1415 Melody Lane, Building F
Bisbee, AZ 85603

RE: DAHLIA SOLAR PROJECT - SPECIAL USE PERMIT APPLICATION
AGENT DESIGNATION

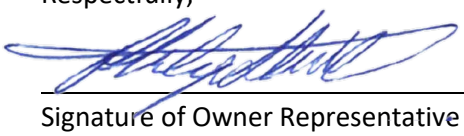
Horus Energy AZ 1 LLC (the Applicant) is requesting a Special Use Permit (SUP) for approval to construct and operate a solar energy power plant in Cochise County, Arizona. The Dahlia Solar Project (the Project) is planned on property zoned RU-4 and located on two assessor parcels: 407-18-003 and 407-17-001.

With this letter, I designate WestLand Engineering & Environmental Services as my agent for the purposes of the Special Use Permit application submittal. The agent contact information is:

Diana Sandoval, Env. Planner
WestLand Engineering & Environmental
4001 E. Paradise Falls Dr.
Tucson, AZ 85712
Telephone: 1-520-206-9585
Email: dsandoval@westlandresources.com

If you have any questions or require additional information, please do not hesitate to contact me.

Respectfully,



Signature of Owner Representative

April 23, 2024
Date

Philip Stubbs
Typed/Printed Name of Representative

+447772821088
Phone Number

Vice President
Title of Representative

Attachment 2
Application Form Extended Responses

SPECIAL USE APPLICATION
ATTACHMENT 2. APPLICATION FORM EXTENDED RESPONSES

Note 1. Property Info

The Project site is composed of two parcels with separate landowners: AURUM HOLDINGS INC (407-18-003) and TOENIES MARK M & LYMY BETH D (407-17-001). The Applicant has executed agreements with the landowners to allow the Applicant all rights to entitle and build on the parcels. The landowners have provided letters of authorization for the Special Use Permit application (see Attachment 3 of SUP Form).

Note 2. Supplemental Questions #1

The Applicant is requesting a Special Use Permit (SUP) proposing a Solar Energy Power Plant. The SUP would allow construction, operation and decommissioning of the Dahlia Solar Project (the Project) for Arizona Public Service's (APS) southern electric service territory. As coal power plants are retired and local energy demands increase, utility companies are depending more on solar generation facilities. This Project will provide up to 75 megawatts alternating current (MWac) of clean power; enough to power 15,000 homes. This is equivalent to 32,000 cars taken off the road. The Project offers enhanced grid resiliency, local utility affordability and support for future load growth needs, better positioning Arizona to attract additional industry via power availability.

The Project site is in zoning district RU-4 and designated Category D- Rural Residential. This Special Use Permit request is consistent with the land use designations of the comprehensive plan and transportation plans and the Project site is located outside master development plans and area plan areas. It is also located outside the Sierra Vista sub-watershed and the Buffalo Soldier Electronic Testing Range. The proposed Project land use is of low-water intensity.

The Project site was carefully selected, and the Project layout has been thoughtfully designed. The Project site is situated adjacent to an existing transmission line so it would not be necessary to build additional power infrastructure to interconnect, limiting offsite impacts. The Project site avoids public lands, and natural resources such as waters of the US, mapped floodplain, and threatened and endangered species. The Applicant is proposing several site-specific conservation measures based on coordination with the Arizona Game and Fish Department to minimize and offset impacts to wildlife and habitats.

Other reasons to support the Dahlia Solar Project are listed below:

- The Project is expected to create jobs during construction and plans to utilize local companies for labor and materials.
- The Project site will produce tax revenue over the 40 to 50-year life of the Project that will directly benefit Cochise County.
- Modern solar panels are optimized to absorb sunlight and convert energy. The panels incorporate an anti-reflective coating, integral to the panel to avoid glare.
- To avoid light pollution for neighbors and wildlife, all lighting fixtures will be hooded, shielded, and directed down toward the interior of the site except where necessary for safety. Lighting will utilize motion sensors at most fixtures.
- Wildlife linkages are integrated into the site plan which will provide vegetative visual screening and additional setback on the east side of each parcel.
- Solar projects operate quietly and can be monitored remotely, making them great neighbors. Once constructed, site visits are limited for occasional maintenance on equipment.

- Solar panels are safe for people, animals, and the environment. They do not generate odors or emissions and do not pose a health risk.
- Any damaged panels would be identified during regular inspections. Failure of a panel or any disconnection will alert the operator via the remote monitoring station. When the Project is decommissioned, the panels will be removed, and the site will be restored based on an approved decommissioning and reclamation plan that will be bonded for financial assurances.

Note 3. Supplemental Questions #9

There are presently three informal access points along the north boundary of the Project site (south side of Prince Road) and one at the southeast corner of the western parcel along Central Highway. According to the Cochise County GIS Interactive Map,[1] neither Prince Road nor Central Highway are county-maintained roads along the Project site boundaries. There is a 150-foot planned highway maintenance easement along the westside of Central Highway. Access for the Project has not yet been determined; however, based on the concept plan and comments from neighbors, access will likely be from Central Highway.

Note 4. Supplemental Questions #10

Construction period activities will result in a temporary increase in passenger tracks and large/heavy trucks. During operations and maintenance, only a modest increase in traffic volume will result. During construction, the typical peak season workday (M-F) will see workers arriving during a four-hour window between 6:00 a.m. and 10:00 a.m. and departing during a three-hour window between 1:00 p.m. and 4:00 p.m. The standard construction hours are anticipated to be 6:30 a.m. to 3:30 p.m. The highest proportion of workers will arrive to the site between 6:00 a.m. and 7:00 a.m. (half) and depart between 3:00 p.m. to 4:00 p.m. (one-third), although the volume will be fairly uniform during the arrival and departure hours. It is anticipated that construction of the facility will include an average of 100 construction workers. At construction peak, there may be up to 150 workers, although the peak hour traffic volumes will remain the same as projected with the traffic spread out further over the arrival and departure peak hours.

Note 5. Supplemental Questions #10a and 10b

Truck trip generation includes the volume adjusted for the three (3) passenger car equivalents (PCE) per truck. Large/heavy duty trucks – five (5) daily round trips and 100 passenger vehicles with a total passenger car equivalent of 115 (M-F).

During operations and maintenance of the Project (the majority of the Project life), the Project will be remotely monitored or manned by one to three (1-3) passenger vehicles/pickup trucks that would visit the site approximately five (5) times per month by passenger track.

Note 6. Supplemental Questions #13

Water consumption for the Project will be minimal. Project water needs can be divided into the following two categories:

1. **Construction**—Water will be required to implement the dust control plan and compaction/related aspects of the construction phrase. This water will either be supplied by an onsite well or may be supplied by outside service companies as part of their spray mix system. There will also be stormwater controls and related mitigation measures during construction to manage existing surface water flow and maintain water quality, as required by governing regulations. It is estimated that approximately 150,000 gallons of water would be used during construction over an estimated 12-18-month period.

[1] https://gis-cochise.opendata.arcgis.com/apps/cb4fc995f40043e29e665d9e88007f08/explore

2. **Panel Washing and Maintenance**—On an ongoing basis, the only water supply needed for the Project is for washing and maintaining the solar panels and supporting facilities, in part to maximize energy return. Water use for the 40 to 50-year life of the Project is estimated to be approximately 250,000 gallons per year. This is equivalent to about four residential homes assuming 146 gallons/day per average Arizona resident according to the Arizona Department of Water Quality (ADWR) conservation information.[2]

There are two wellsite's at the Project site. Existing well sites are depicted on the Concept Plan. The water source options being evaluated for the Project are listed below:

- Drilling on-site well(s) prior to the start of construction, to fill temporary water bladders or aboveground tanks. Water would be conveyed to the water bladders or tanks via pumps. The well pumps are likely to be 35 gallons per minute (GPM) pumps and would be powered via underground cables from the Project substation/switchyard.

- Purchasing water from nearby towns within Cochise County and trucking it to the Project site.

Note 7. Supplemental Questions #21

Dust will be created by construction traffic and will be minimized along roadways using dust palliative prior to and during construction. Post-construction, areas of temporary disturbance will be seeded to restore vegetation. While trees and bushes will need to be moved/removed within the developed areas of the Project site, grasses and short vegetation will remain to the extent practical. Temporary disturbance will be stabilized with the application of native seed, re-seeding shall coincide with annual winter and summer rains to avoid the need for irrigation and further water consumption.

Note 8. Supplemental Questions #22

Typical hazardous material use would be limited to lubricants and oils in heavy machinery/mobile equipment during construction, however no releases are anticipated to occur. Even if releases did occur from construction equipment, qualities would likely be *de minimus* in nature.

During operation of the Project, hazardous materials are not expected to be released. The primary materials in solar modules are glass, aluminum, silicone, copper, and trace semiconducting metals. There could be trace amounts of lead from soldering material, which is similar to televisions and cell phones. There is no risk of exposure of leakage and any amount contained in the modules is below the Environmental Protection Agency (EPA) limits.

The Applicant has contacted the Cochise County Emergency Management Director and will prepare an Emergency Response Plan for the Project including emergency contacts, hazard analysis and instructions for various emergency situations. The Applicant will also prepare a construction waste management plan to ensure proper waste disposal and convey compliance requirements during bidding/pre-con meetings.

Note 9. Supplemental Questions #23

Portions of development areas will be mowed/have vegetation removed while maintaining herbaceous ground cover where possible. Internal roadways and substation yards will be graded. No drainage alterations are proposed.

The construction phase of the Project is likely to temporarily cause fugitive dust related to grading, vehicle traffic and other construction activities. Dust and erosion control measures will be detailed in a Stormwater Pollution Prevention Plan (SWPPP). The Construction General Permit would follow Arizona Department of

[2] https://new.azwater.gov/conservation/public-resources

Environmental Quality (ADEQ) and EPA requirements. SWPPP best management practices (e.g., silt fencing/straw waddles/rock-lined entrance) will be employed to reduce water erosion and soil transmission until permanent soil stabilization is achieved. Disturbed soils will be permanently stabilized through re-seeding (temporarily disturbance areas) and compaction and/or paving (permanent disturbance areas such as roads). The following Best Management Practices (BMPs) would be incorporated to minimize fugitive dust and wind erosion:

- Minimize grading and vegetation removal.
- In areas where vegetation removal and/or grading is required, schedule the process of vegetation removal to the minimum time required prior to module installation.
- Limit vehicle speed on access roads and on solar facility roads to 15 miles per hour.
- Apply environmentally safe polymer or water to disturbed soil areas using water trucks to control dust and maintain proper moisture levels for soil compaction. Minimize over application of water to prevent runoff and ponding.
- Suspend grading during periods of high wind.
- Cover all trucks hauling soil or other loose material in and out of the proposed Project site.
- Gravel or aggregate should be used where access roads meet paved roads to limit off-site disturbance and prevent mud and dirt track-out.

A Notice of Intent to Clear Land will be filed with the Arizona Department of Agriculture, prior to clearing/trimming vegetation.

Attachment 3a
Owner Authorization APN 407-17-001

April 15, 2024

COCHISE COUNTY
Planning and Zoning Division
1415 Melody Lane, Building F
Bisbee, AZ 85603

RE: DAHLIA SOLAR PROJECT - SPECIAL USE PERMIT APPLICATION
LETTER OF AUTHORIZATION | APN 407-17-001

Horus Energy AZ 1 LLC (the Applicant) is requesting a Special Use Permit (SUP) for approval to construct and operate a solar energy power plant in Cochise County, Arizona. The Dahlia Solar Project (the Project) is planned on property zoned RU-4 and located on two assessor parcels: 407-18-003 and 407-17-001.

Parcel 407-17-001 is owned by MARK M. TOENIES & LYMY BETH D. TOENIES and is leased to the Applicant with permissions for entitlements including complying with or obtaining any land use permits and approvals, change of zoning, building permits, development permits, construction permits, subdivision and platting permits, environmental impact reviews or any other approvals required for the financing, construction, installation, replacement, relocation, maintenance, operation or removal of the solar energy systems.

If you have any questions or require additional information, please do not hesitate to contact me.

Respectfully,

Mark Toenies — 4/17/2024
Signature of Owner(s) — Date

Mark Toenies — 918-332-6200
Typed/Printed Name — Phone Number

[signature] — 4/17/2024
Signature of Owner(s) — Date

Lymy Beth Toenies — 918-332-6200
Typed/Printed Name — Phone Number

Attachment 3b
Owner Authorization APN 407-18-003

April 23, 2024

COCHISE COUNTY
Planning and Zoning Division
1415 Melody Lane, Building F
Bisbee, AZ 85603

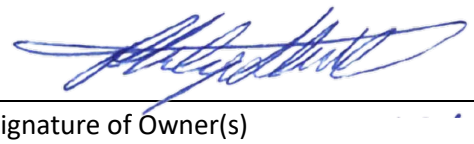
RE: DAHLIA SOLAR PROJECT - SPECIAL USE PERMIT APPLICATION
LETTER OF AUTHORIZATION | APN 407-18-003

Horus Energy AZ 1 LLC (the Applicant) is requesting a Special Use Permit (SUP) for approval to construct and operate a solar energy power plant in Cochise County, Arizona. The Dahlia Solar Project (the Project) is planned on property zoned RU-4 and located on two assessor parcels: 407-18-003 and 407-17-001.

Parcel 407-18-003 is owned by Aurum Holdings Inc. and is leased to the Applicant with permissions for entitlements including complying with or obtaining any land use permits and approvals, change of zoning, building permits, development permits, construction permits, subdivision and platting permits, environmental impact reviews or any other approvals required for the financing, construction, installation, replacement, relocation, maintenance, operation or removal of the solar energy systems.

If you have any questions or require additional information, please do not hesitate to contact me.

Respectfully,



Signature of Owner(s)

April 23, 2024
Date

Philip Stubbs, Vice President
Typed/Printed Name

+447772821088
Phone Number

Attachment 4
Site Concept Plan

(uploaded as separate file)

Attachment 5
ALTA Land Title Survey

ALTA/NSPS LAND TITLE SURVEY

4283 & 4355 WEST PRINCE ROAD

LOCATED IN: SECTION 9, TOWNSHIP 23 SOUTH, RANGE 26 EAST

ELFRIDA, COCHISE COUNTY, ARIZONA 85617

SITE INFORMATION

N/F: MARK M. TOENIES AND LYMY BETH D. TOENIES (AS TO 4355 WEST PRINCE RD)
& RWLJ BERRY PROPERTIES LIMITED PARTNERSHIP "A" LLP (AS TO 4283 WEST PRINCE RD)
4283 & 4355 WEST PRINCE RD, ELFRIDA, AZ 85617
APN: 40717001 & 40718003
25,987,717 SQUARE FEET±, OR 596.595 ACRES±

TITLE COMMITMENT INFORMATION NCS-1175556-NRG

THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY, ISSUING OFFICE FILE NO. NCS-1175556-NRG, WITH A COMMITMENT DATE OF APRIL 13, 2023 AT 7:30 A.M.

SCHEDULE A DESCRIPTION NCS-1175556-NRG

THE LAND REFERRED TO HEREIN BELOW IN SITUATED IN THE COUNTY OF COCHISE, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

THE WEST HALF OF THE SECTION 10, TOWNSHIP 23 SOUTH, RANGE 26 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, COCHISE COUNTY, ARIZONA;

EXCEPT THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER; AND

EXCEPT THE NORTH 50.00 FEET; AND

EXCEPT THE WEST 100.00 FEET.

NOTES CORRESPONDING TO SCHEDULE B NCS-1175556-NRG

(11) — EASEMENTS AND RIGHTS INCIDENT THERETO, AS SET FORTH IN INSTRUMENT:
RECORDED IN **BOOK : 33, MISCELLANEOUS RECORDS**
PAGE : 206
PURPOSE : SMOKE
(AFFECTS THE NORTHWEST QUARTER)
(AFFECTS, BLANKET IN NATURE)

(12) — EASEMENTS AND RIGHTS INCIDENT THERETO, AS SET FORTH IN INSTRUMENT:
RECORDED IN **DOCKET : 925**
PAGE : 299
PURPOSE : ELECTRIC TRANSMISSION OR DISTRIBUTION LINE OR SYSTEM
(AFFECTS, BLANKET IN NATURE OVER UTILITIES AS INSTALLED)

(13) — MATTERS SHOWN ON SURVEY:
RECORDED IN **BOOK : 1 OF SURVEYS**
PAGE : 35
(AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

(14) — EASEMENTS AND RIGHTS INCIDENT THERETO, AS SET FORTH IN INSTRUMENT:
RECORDED IN **DOCUMENT NO. : 8508-15397**
PURPOSE : ELECTRIC TRANSMISSION OR DISTRIBUTION LINE OR SYSTEM
(AFFECTS THE EAST 16.00 FEET OF THE NORTHWEST QUARTER, EXCEPT THE NORTH 275.00 FEET THEREOF)
(AFFECTS, PLOTTED AS SHOWN)

(15) — ANY PRIVATE RIGHTS OR EASEMENTS ON, UNDER AND ACROSS THOSE PORTIONS OF SAID LAND LYING WITHIN THE ROAD, STREET OR ALLEY ABANDONED BY RESOLUTION OR ORDINANCE:
RECORDED IN **DOCUMENT NO. : 9705-12862**
(AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

(16) — TERMS, CONDITIONS, LIABILITIES AND OBLIGATIONS CONTAINED IN INSTRUMENT ENTITLED "ZONING ORDINANCE 19-07:
TO ADOPT COCHISE COUNTY ZONING REGULATIONS, ARTICLE 17 MINOR LAND DIVISIONS", ACCORDING TO THE TERMS AND CONDITIONS CONTAINED THEREIN:
RECORDED IN **DOCUMENT NO. 2019-16538**
(AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

TITLE COMMITMENT INFORMATION NCS-1175554-NRG

THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY, ISSUING OFFICE FILE NO. NCS-1175554-NRG, WITH A COMMITMENT DATE OF APRIL 13, 2023 AT 7:30 A.M.

SCHEDULE A DESCRIPTION NCS-1175554-NRG

THE LAND REFERRED TO HEREIN BELOW IN SITUATED IN THE COUNTY OF COCHISE, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

THE EAST HALF OF SECTION 9, TOWNSHIP 23 SOUTH, RANGE 26 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, COCHISE COUNTY, ARIZONA;

EXCEPT THE EAST 34.00 FEET THEREOF.

NOTES CORRESPONDING TO SCHEDULE B NCS-1175554-NRG

[10] — EASEMENTS AND RIGHTS INCIDENT THERETO, AS SET FORTH IN INSTRUMENT:
RECORDED IN **DOCKET: 474**
PAGE: 52
PURPOSE: ELECTRIC TRANSMISSION OR DISTRIBUTION LINE OR SYSTEM
(AFFECTS, PLOTTED AS SHOWN)

[11] — EASEMENTS AND RIGHTS INCIDENT THERETO, AS SET FORTH IN INSTRUMENT:
RECORDED IN **DOCKET: 925**
PAGE: 298
PURPOSE: ELECTRIC TRANSMISSION OR DISTRIBUTION LINE OR SYSTEM
(AFFECTS AN UNDEFINED PORTION OF THE NORTHEAST QUARTER)
(UNABLE TO PLOT - DOCK 925, PG 298 EASEMENT DESCRIPTION PARTIALLY ILLEGIBLE)

[12] — ANY ACTION THAT MAY BE TAKEN BY THE DEPARTMENT OF TRANSPORTATION TO ACQUIRE RIGHT OF WAY FOR COUNTY ROAD AS DISCLOSED BY RESOLUTION OF INTENT:
RECORDED IN **DOCKET: 1130**
PAGE: 355
(COVERS THE NORTH 100.00 FEET OF SECTION 9, TOWNSHIP 23, RANGE 26)
(AFFECTS, RIGHT-OF-WAY RELEASED PER DOC. NO. 9705-12862)

[13] — MATTERS SHOWN ON SURVEY:
RECORDED IN **BOOK: 1 OF SURVEYS**
PAGE: 35
(AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

[14] — TERMS, CONDITIONS, LIABILITIES AND OBLIGATIONS CONTAINED IN INSTRUMENT ENTITLED "ZONING ORDINANCE 19-07:
TO ADOPT COCHISE COUNTY ZONING REGULATIONS, ARTICLE 17 MINOR LAND DIVISIONS", ACCORDING TO THE TERMS AND CONDITIONS CONTAINED THEREIN:
RECORDED IN **DOCUMENT NO. 2019-16538**
(AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

PARKING INFORMATION

NO DESIGNATED STRIPED
PARKING SPACES OBSERVED
AT THE TIME OF THE ALTA SURVEY

FLOOD ZONE INFORMATION

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 04003C2575F, WHICH BEARS AN EFFECTIVE DATE OF 08/28/2008 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

ZONE "X" - AREA OF MINIMAL FLOOD HAZARD, USUALLY DEPICTED ON FIRMS AS ABOVE THE 500-YEAR FLOOD LEVEL. ZONE "X" IS THE AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD AND PROTECTED BY LEVEE FROM 100-YEAR FLOOD.

BASIS OF BEARING

THE BASIS OF BEARING OF THIS SURVEY IS GRID NORTH BASED ON THE NORTH LINE OF SECTION 9. THE BEARING IS DENOTED AS S89°41'30"W PER GPS COORDINATE OBSERVATIONS, ARIZONA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD83-2011.
LATITUDE = 31°26'42.3301"
LONGITUDE = -109°41'55.4013"
CONVERGENCE ANGLE = 00°14'38.8379"

SIGNIFICANT OBSERVATIONS

(A) — FENCE APPEARS TO EXTEND OVER PROPERTY LINE BY AS MUCH AS 192.5'.

UTILITY INFORMATION

THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND APPURTENANCES ONLY. THE SURVEYOR WAS NOT PROVIDED WITH UNDERGROUND PLANS OR SURFACE GROUND MARKINGS TO DETERMINE THE LOCATION OF ANY SUBTERRANEAN USES.

ZONING INFORMATION

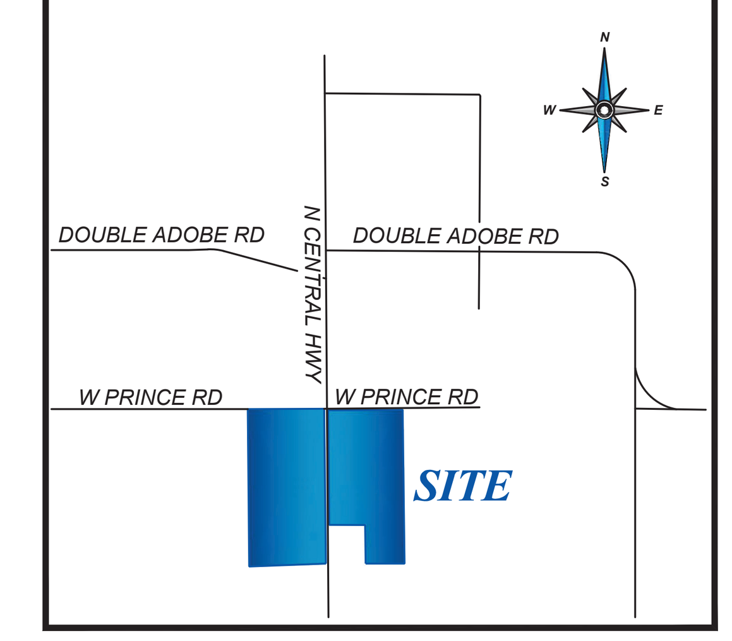
PROPERTY IS CURRENTLY ZONED:
AWAITING ZONING REPORT

ITEM	REQUIRED	OBSERVED
PERMITTED USE		VACANT LAND
MIN. SETBACKS FRONT		N/A
MIN. SETBACKS SIDE		N/A
MIN. SETBACKS REAR		N/A
MAX. BUILDING HEIGHT		N/A
MIN. LOT AREA		25,987,717 SQ FT±
MIN. LOT FRONTAGE		11,919.93'
MAX. BLDG COVERAGE		N/A
PARKING REGULAR		0
PARKING HANDICAP		0
PARKING TOTAL		0

SEE SHEET 2 OF 2 FOR SURVEY DRAWING

VICINITY MAP

NOT TO SCALE



GENERAL NOTES

1. SOME FEATURES SHOWN ON THIS PLAT MAY BE SHOWN OUT OF SCALE FOR CLARITY.
2. DIMENSIONS ON THIS PLAT ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED. BEARINGS ARE GRID. MONUMENTS WERE FOUND AT POINTS WHERE INDICATED.
3. FIELD WORK WAS COMPLETED ON DECEMBER 18, 2023.
4. THE DISTANCES SHOWN HEREON ARE UNITS OF GROUND MEASUREMENT.
5. THE NEAREST INTERSECTING STREET IS THE INTERSECTION OF WEST PRINCE ROAD AND NORTH CENTRAL HIGHWAY, WHICH ABUTS THE NORTHWESTERLY CORNER OF THE EASTERLY PORTION OF THE SUBJECT PROPERTY.
6. THE SUBJECT PROPERTY HAS DIRECT PHYSICAL ACCESS, WITHOUT THE BENEFIT OF CURB CUTS OR OTHER ACCESS FEATURES, TO NORTH CENTRAL HIGHWAY AND WEST PRINCE ROAD, EACH BEING A PUBLICLY DEDICATED RIGHT-OF-WAY.
7. EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS PLAT, THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT PROPERTY: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS WHICH WERE VISIBLE AT THE TIME OF SURVEY; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS OR OTHER LAND USE REGULATIONS; AND ANY OTHER FACTS WHICH AN ACCURATE TITLE SEARCH MAY DISCLOSE.
8. NO SURVEYOR OR ANY OTHER PERSON OTHER THAN A LICENSED ARIZONA ATTORNEY MAY PROVIDE LEGAL ADVICE CONCERNING THE STATUS OF TITLE TO THE PROPERTY DESCRIBED IN THIS SURVEY ("THE SUBJECT PROPERTY"). THE PURPOSE OF THIS SURVEY, AND THE COMMENTS RELATED TO THE SCHEDULE B-II EXCEPTIONS, IS ONLY TO SHOW THE LOCATION OF BOUNDARIES AND PHYSICAL OBJECTIONS IN RELATION THERETO. TO THE EXTENT THAT THE SURVEY INDICATES THAT THE LEGAL INSTRUMENT "AFFECTS" THE SUBJECT PROPERTY, SUCH STATEMENT IS ONLY INTENDED TO INDICATE THAT PROPERTY BOUNDARIES INCLUDED IN SUCH INSTRUMENT INCLUDE SOME OR ALL OF THE SUBJECT PROPERTY. THE SURVEYOR DOES NOT PURPORT TO DESCRIBE HOW SUCH INSTRUMENT AFFECTS THE SUBJECT PROPERTY OR THE ENFORCEABILITY OR LEGAL CONSEQUENCES OF SUCH INSTRUMENT.
9. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS WERE TAKEN FROM COCHISE COUNTY GIS.
10. THE SUBJECT PROPERTY SHOWN HEREON FORMS A MATHEMATICALLY CLOSED FIGURE AND IS CONTIGUOUS WITH THE ADJOINING PUBLIC RIGHT-OF-WAY AND/OR ADJOINING PARCELS WITH NO GAPS OR OVERLAPS.
11. THE TERM "CERTIFY" OR "CERTIFICATION" AND "CORRECT" AS NOTED HEREON AND AS IT PERTAINS TO LAND SURVEYING SERVICES AS SHOWN ON THIS DOCUMENT SHALL MEAN, "A STATEMENT SIGNED BY THE PROFESSIONAL LAND SURVEYOR BASED ON THE FACTS AND KNOWLEDGE KNOWN TO THE PROFESSIONAL LAND SURVEYOR AT THE TIME OF THE SURVEY AND IS NOT A GUARANTEE OR WARRANTY, EITHER IMPLIED OR EXPRESSED.
12. I, DENVER WINCHESTER, HEREBY CERTIFY THAT THAT A SURVEY WAS MADE UNDER MY DIRECT SUPERVISION OF THE HEREON DESCRIBED PROPERTY. THE SURVEY WAS MADE ON THE GROUND IN ACCORDANCE WITH THE ARIZONA BOUNDARY SURVEY MINIMUM STANDARDS AS ADOPTED BY THE ARIZONA STATE BOARD OF TECHNICAL REGISTRATION AND FURTHER CERTIFY THAT THIS PLAT MEETS SAID STANDARDS AND ACCURATELY REPRESENTS SAID SURVEY.

SURVEYOR'S CERTIFICATE

TO: FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 7A, 8, 9 & 14 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 12/18/2023.

DATE OF PLAT OR MAP: 01/09/2024

REGISTERED LAND SURVEYOR
CERTIFICATE NO. 79657
JAMES WINCHESTER
Date Signed 03/28/2024
ARIZONA U.S.A.

JAMES WINCHESTER
PROFESSIONAL LAND SURVEYOR 79657
STATE OF ARIZONA
FIRM REGISTRATION NO.: 20154

DRAWN BY
REVISIONS
DATE

Manhard CONSULTING
Civil Engineering | Surveying & Geospatial Services | GIS
Water Resource Management | Construction Management

DAHLIA
4283 & 4355 WEST PRINCE ROAD
ALTA/NSPS LAND TITLE SURVEY

PROJ. MGR.: TWP
PROJ. ASSOC.: CJF
DRAWN BY: SH
DATE: 01/09/24
SCALE: 1"=300'

ALTA/NSPS LAND TITLE SURVEY

4283 & 4355 WEST PRINCE ROAD

LOCATED IN: SECTION 9, TOWNSHIP 23 SOUTH, RANGE 26 EAST

ELFRIDA, COCHISE COUNTY, ARIZONA 85617

FOUND 1/2" REBAR, BEARS 15.94'(M) ON-LINE FROM NORTHWEST PROPERTY CORNER

NORTHWEST CORNER SEC 9, T-23-S, R-26-E FOUND 1/2" REBAR W/ CAP "RLS 11845"

2658.11'(M) 2661.44'(R2)

WEST PRINCE ROAD
VARIABLE WIDTH PUBLIC RIGHT-OF-WAY
VARIABLE WIDTH ASPHALT PAVEMENT

BASIS OF BEARING
N 89°48'53" W 5302.44'(R2)
S 89°41'30" W 5317.69'(M)

NORTH 1/4 CORNER SEC 9, T-23-S, R-26-E SET 2" ALUMINUM DISK "WINCHESTER AZ 79657"

N/F GEORGE & LINDA MORIN LIVING TRUST W PRINCE RD, ELFRIDA, AZ 85617 APN: 40711009A

NORTHWEST CORNER SEC 10, T-23-S, R-26-E FOUND 2" ALUMINUM DISK

FOUND 3" DISK, BEARS 60.96'(M) ON-LINE FROM NORTHWEST CORNER

FOUND ANGLE IRON, BEARS 31.71'(M) ON-LINE FROM NORTHEAST PROPERTY CORNER

SET 5/8"REBAR W/ CAP "WINCHESTER AZ 79657"

NCS-1175554-NRG EXCEPT THE NORTH 50.00'

NCS-1175556-NRG EXCEPT THE EAST 34.00'

NORTH 1/4 CORNER SEC 10, T-23-S, R-26-E

S 89°58'35" W 2659.18'(R1)
S 89°51'30" W 2659.25'(M)
S 89°58'35" W (R1)

NORTHEAST CORNER SEC 10, T-23-S, R-26-E FOUND 1.5" BENT IRON PIPE

S 89°59'28" W 2663.86'(R1)
S 89°52'23" W 2662.28'(M)

FOUND 1/2" REBAR W/ CAP "22275", BEARS 50.01'(M) ON-LINE FROM CORNER

SET 5/8"REBAR W/ CAP "WINCHESTER AZ 79657"

N/F JAMES ROBINSON 6827 N MULEDEER PL ELFRIDA, AZ 85617 APN: 40718001G

POND

16' ELECTRICAL EASEMENT PER DOC. NO. 8508-15397

N/F KATHLEEN LONG 6809 N MULEDEER PL, ELFRIDA, AZ 85617 APN: 40718001E

CC PAD

OVH

N/F KRISTIAN JOHN KAVANAGH W PRINCE RD, ELFRIDA, AZ 85617 APN: 40717004H

N/F SHELLY CHRISTIANSON 6749 N MULEDEER PL, ELFRIDA, AZ 85617 APN: 40718002

N/F SHELLY CHRISTIANSON N MULEDEER PL, ELFRIDA, AZ 85617 APN: 40718005

N/F SHELLY CHRISTIANSON 6749 N MULEDEER PL, ELFRIDA, AZ 85617 APN: 40718002

NCS-1175554-NRG & NCS-1175556-NRG
PORTION OF SEC 9 & 10, T-23-S, R-26-E
TOTAL AREA:
25,987,717 SQ FT±
596.595 ACRES±

WEST 1/2 SEC 9, T-23-S, R-26-E

EAST 1/2 OF SEC 10, T-23-S, R-26-E

NCS-1175556-NRG
EAST 1/2 OF SEC 9, T-23-S, R-26-E
OWNER: MARK M. TOENIES AND LYMY BETH D. TOENIES
ADDRESS: 4355 W PRINCE RD,
ELFRIDA, AZ 85617
14,107,665 SQ FT±
323.867 ACRES±
APN: 40717001

NCS-1175554-NRG
PORTION OF THE WEST 1/2 OF SEC 10, T-23-S, R-26-E
OWNER: AURUM HOLDINGS INC.
ADDRESS: 4283 W PRINCE RD,
ELFRIDA, AZ 85617
11,880,052 SQ FT±
272.728 ACRES±
APN: 40718003

N/F COLLINS ROSE RESIDENCE TRUST N CENTRAL HWY, ELFRIDA, AZ 85617 APN: 40717004G

49' ELECTRICAL EASEMENT PER DOCK 474, PG 52

NCS-1175554-NRG EXCEPT THE WEST 100.00 FEET

NCS-1175554-NRG EXCEPT THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 SEC 10, T-23-S, R-26-E

NORTH CENTRAL HIGHWAY
VARIABLE WIDTH PUBLIC RIGHT-OF-WAY
VARIABLE WIDTH GRAVEL PAVEMENT

N/F N & B CATTLE LLC N CENTRAL HWY, ELFRIDA, AZ 85617 APN: 40717002F

N/F DOGWOOD REV LIVING TRUST 6685 N CENTRAL HWY, ELFRIDA, AZ 85617 APN: 40718007

N/F MICHAEL & SARAH WALLER N CENTRAL HWY, ELFRIDA, AZ 85617 APN: 40718006

N/F ROBERT ROMERO N CENTRAL HWY, ELFRIDA, AZ 85617 APN: 40718004

N/F OWNERSHIP INFORMATION NOT AVAILABLE APN: 620787 PER BK 407, PG 01

SOUTHWEST CORNER SEC 9, T-23-S, R-26-E FOUND 1/2" REBAR

SOUTH 1/4 CORNER SEC 9, T-23-S, R-26-E SET 2" ALUMINUM DISK "WINCHESTER AZ 79657"

SOUTHEAST CORNER SEC 10, T-23-S, R-26-E FOUND 2" DISK IN CONCRETE INSCRIBED "PLS 11281"

SET MAG-NAIL W/ WASHER "WINCHESTER AZ 79657"

SOUTH 1/4 CORNER SEC 10, T-23-S, R-26-E FOUND 2" DISK IN CONCRETE INSCRIBED "PLS 11281"

SOUTHEAST CORNER SEC 10, T-23-S, R-26-E FOUND 1.5" IRON PIPE

LEGEND & SYMBOLS

- FOUND MONUMENT AS-NOTED
- SET MONUMENT AS-NOTED
- COMPUTED POINT
- MB MAILBOX
- W WELL
- GUY WIRE ANCHOR
- POWER POLE
- EM ELECTRIC METER
- WV WATER VALVE
- SQ FT SQUARE FEET
- OVH OVERHANG
- (M) MEASURED/CALCULATED DIMENSION
- (R) RECORD DIMENSION
- (R1) RECORD DIMENSION PER FEE NO. 990411193
- (R2) RECORD DIMENSION PER FEE NO. 25035803
- N/F NOW OR FORMERLY
- TYP TYPICAL
- CC CONCRETE
- NG NATURAL GROUND
- BOUNDARY LINE
- EASEMENT LINE
- R/W RIGHT-OF-WAY LINE
- C/L CENTERLINE
- FENCE LINE
- OVERHEAD POWER LINE

N

W E

S

SCALE: 1" = 300'
GRAPHIC SCALE
0 150' 300' 600'

DRAWN BY | REVISIONS | DATE

Manhard CONSULTING
Civil Engineering | Surveying & Geospatial Services | Construction Management | Water Resource Management

DAHLIA

4283 & 4355 WEST PRINCE ROAD

ALTA/NSPS LAND TITLE SURVEY

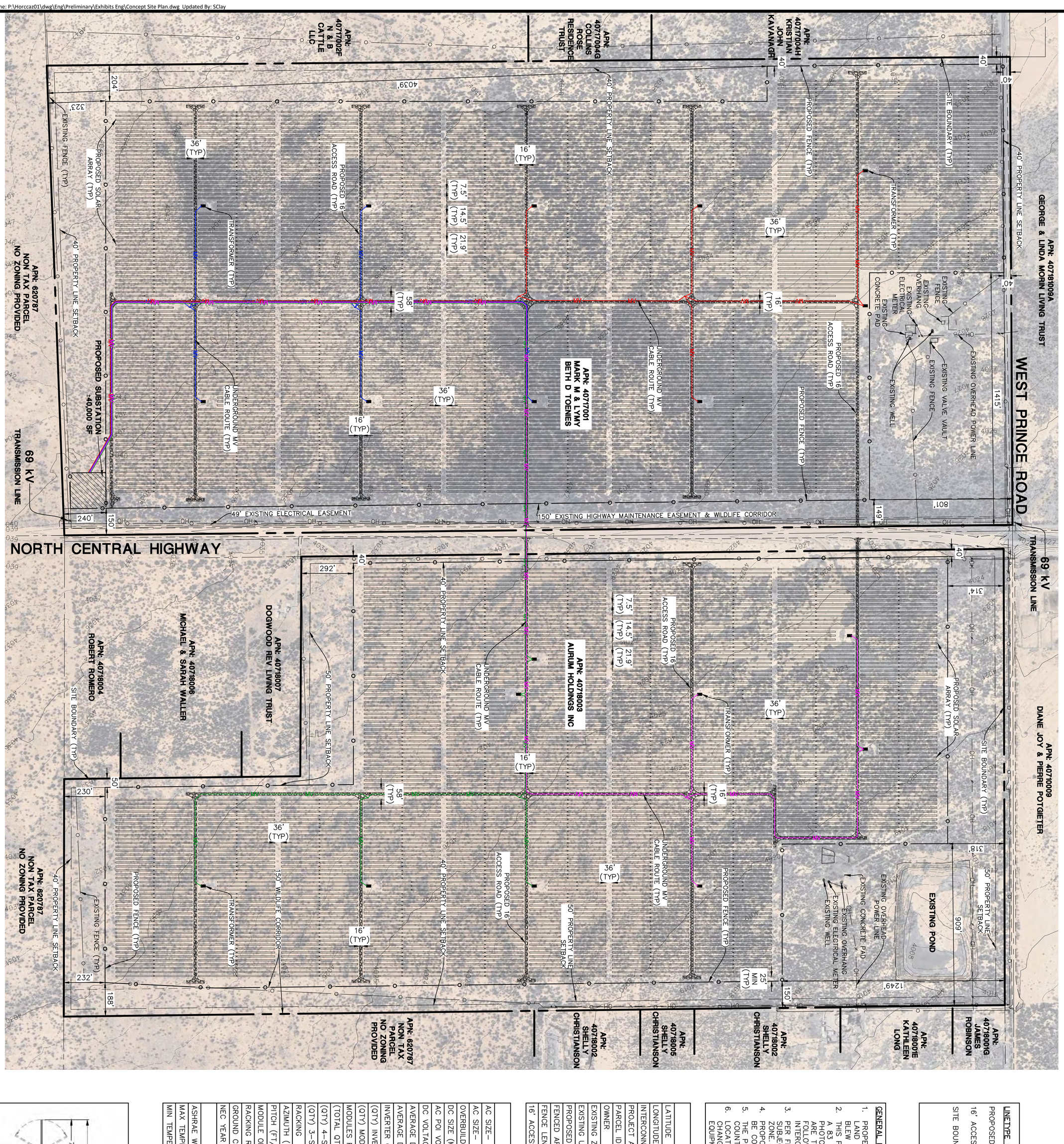
PROJ. MGR.: TWP
PROJ. ASSOC.: CJF
DRAWN BY: SH
DATE: 01/09/24
SCALE: 1" = 300'

SHEET 2 OF 2

Attachment 6

Special Use Permit Narrative and Supporting Documents

(uploaded as separate file)



LINETYPE LEGEND:

PROPOSED FENCE	MV FEEDER 100
16' ACCESS ROAD	MV FEEDER 200
SITE BOUNDARY	MV FEEDER 300
	MV FEEDER 400

GENERAL NOTES:

1. PROPERTY LINE BOUNDARIES WERE TAKEN FROM ALTA/NSPS LAND TITLE SURVEY OF HORUS DAHLIA SOLAR PREPARED BY BLEW INC. DATED: 02/12/2024.
2. THIS PROJECT CONSISTS OF THE DESIGN AND INSTALLATION OF A 83 MWAC (NAMEPLATE), 75 MWAC (POI) SOLAR PHOTOVOLTAIC SYSTEM. BIFACIAL PV MODULES 1 IN PORTRAIT ARE TO BE MOUNTED ON SINGLE AXIS TRACKERS, WHICH FOLLOW FROM EAST TO WEST THROUGHOUT THE DAY.
3. PER FEMA FLOOD MAP 04003C2575F DATED 08/28/2008, SUBJECT PROPERTY IS NOT LOCATED IN A FLOOD HAZARD ZONE.
4. PROPOSED ACCESS POINTS AND ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH HIGHWAY AUTHORITY.
5. THE PROJECT WILL COMPLY WITH ALL ZONING AND COCHISE COUNTY REQUIREMENTS.
6. LOCATIONS OF ALL PROPOSED FACILITIES ARE SUBJECT TO CHANGE DUE TO PERMITTING CONSTRAINTS, SITE CONDITIONS, EQUIPMENT SPECIFICATIONS AND UTILITY COORDINATION.

PROJECT SITE DETAILS

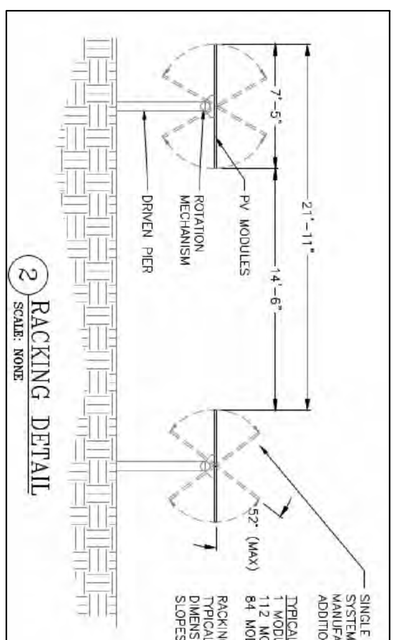
LATITUDE	31.442248
LONGITUDE	-109.692282
INTERCONNECTION VOLTAGE	34.5 kV AC
PROJECT AREA	596.595 ACRES
PARCEL ID'S	40717001, 40718003
OWNER	HORUS CAPITAL
EXISTING ZONING	RU-4 (RURAL ZONING)
EXISTING USE	N/A
PROPOSED USE	SOLAR PV GENERATION
FENCED AREA	±515.72 ACRES
FENCE LENGTH	±30,126 LF
16' ACCESS ROAD	±31,617 LF

PROJECT SITE DETAILS

AC SIZE- POI LIMIT (MWAC)	75.00
AC SIZE- NAMEPLATE (MWAC)	83.60
OVERBUILD %	111.47%
DC SIZE (MWDC)	105.49
AC POI VOLTAGE (kV)	34.5
DC VOLTAGE (VDC)	1500
AVERAGE DC/AC RATIO (NAMEPLATE)	1.26
AVERAGE DC/AC RATIO (POI LIMIT)	1.41
INVERTER OUTPUT VOLTAGE (V)	645 (INV) / 34.5k (XFMR)
(QTY) INVERTERS	(19) SUNGROW SG4400UD-MV-US
(QTY) MODULES- TYPE 1	(193,564) JINKO JKM545M-72HL4-TV (545W BIFACIAL)
MODULES PER STRING	28
(TOTAL QTY) STRINGS	6,913
(QTY) 4-STR TABLE	1,636
(QTY) 3-STR TABLE	123
RACKING	ATI DURATRACK HZ (1P TRACKER)
AZIMUTH (DEG)	180
PITCH (FT/M)	21.94/6.69
MODULE ORIENTATION	PORTRAIT (1P)
RACKING ROTATION (DEG)	± 52
GROUND COVER RATIO	34.00%
NEC YEAR	2020

SITE DESIGN PARAMETERS

ASHRAE WEATHER STATION	BISBEE DOUGLAS INTL, AZ, USA (WMO: 722720)
MAX TEMPERATURE (°C)	35
MIN TEMPERATURE (°C)	-9.9



2 RACKING DETAIL
SCALE: NONE

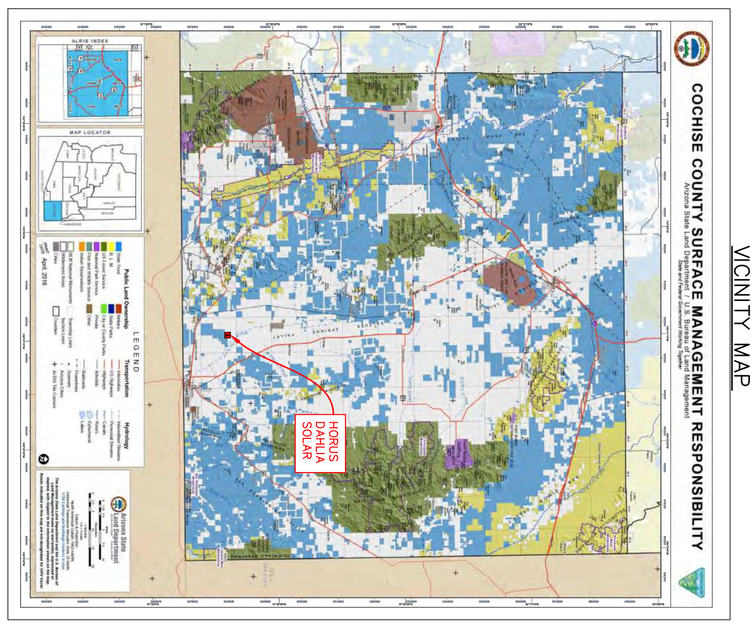
SINGLE AXIS TRACKER RACKING SYSTEM BY ATI. SEE MANUFACTURER DRAWINGS FOR ADDITIONAL DETAILS

TYPICAL TABLE SIZE:
1 MODULE PORTRAIT,
112 MODULES WIDE
84 MODULES WIDE

RACKING DIMENSIONS SHOWN ARE TYPICAL FOR FLAT GRADE. DIMENSIONS MAY VARY WHERE SLOPES EXIST.

PUREPOWER ENGINEERING
ELECTRICAL ENGINEER - PURE POWER ENGINEERING

VICINITY MAP



SCALE: 1"=300'
0 150 300 600

N

HORUS DAHLIA SOLAR

COCHISE COUNTY, ARIZONA

CONCEPT SITE PLAN

PROJ. MGR.: KJC
PROJ. ASSOC.: MSP
DRAWN BY: SB
DATE: 03-19-24
SCALE: 1"=300'
SHEET EXH
HOR.CCAZ01

Manhard CONSULTING
1 East Wacker Drive, Suite 2700, Chicago, IL 60601 ph:312.824.3801 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

DATE	REVISIONS	DRAWN BY

NOT FOR CONSTRUCTION

DAHLIA SOLAR PROJECT
SPECIAL USE PERMIT APPLICATION
NARRATIVE AND SUPPORTING DOCUMENTS

Prepared for:

Cochise County Planning and Zoning Division
1415 Melody Lane, Building F – Bisbee, Arizona 85603

Prepared by:

WestLand Engineering & Environmental Services
4001 E. Paradise Falls Drive – Tucson, Arizona 85712

And

HORUS ENERGY

April 25, 2024

Table of Contents

Figures

(follow text)

Appendices

1. PROJECT INTRODUCTION

The Dahlia Solar Project (the Project) is proposed by Horus Energy AZ 1 LLC (the Applicant), a subsidiary of Horus Partners Fund, commonly known as Horus Energy. The Project will be a 75-megawatt alternating current (MWac) solar energy power plant on approximately 596 acres of privately-owned, rural land situated northwest of Douglas, Arizona. The Project site is located south of the intersection of West Prince Road and North Central Highway, approximately ten miles north of the border. The Project parcels (407-18-003 and 407-17-001) are in Sections 9 and 10, Township 23 South, Range 26 East, in portions of Gila Salt River Baseline and Meridian (**Figures 1 and 2**).

The proposed Project consists of the development of a photovoltaic (PV) array, a substation, associated access roads, an operations and maintenance facility, existing onsite water wells, construction laydown areas, and other ancillary components. The generation interconnect (gen-tie) will occur onsite and will be limited to only the number of poles needed to interconnect the Project substation to the existing onsite power line. The gen-tie will utilize steel poles (rather than wood) at approximately the same height as existing poles. Project construction is expected to begin in 2027 and take approximately 12 to 18 months to complete.

Construction activities will include:

- Seasonal pre-construction surveys, as needed.
- Treatment of unpaved access road (dust palliative); access to the Project site will use existing surface streets—Central Highway runs between the Project parcels, and Prince Road runs along north Project boundary.
- Installation of trailer(s) and designated laydown and materials storage areas.
- Fence installation.
- Mowing and vegetation removal with minimal grading—cross-grading of the Project site will be limited to the 16- to 20-foot (ft)-wide access roads within the solar facility site and for the operations and maintenance area.
- Installation of any necessary drainage and erosion controls.
- PV panel/tracker assembly.
- Construction of PV arrays, gen-tie line, substation, and other ancillary facilities onsite.

The Project will be in operation for approximately 40 to 50 years, after which a decommissioning plan would be implemented. The Applicant intends to execute an interconnection agreement with Arizona Public Service (APS) in 2026, with construction to begin in 2027. Operations would begin by mid-2028.

The Applicant is submitting this Special Use Permit application in compliance with the requirements set forth by Cochise County Zoning Ordinance, Article 18 governing site development standards for Solar

Energy Power Plants. The *Special Use Permit* application form and its *Attachments* (*1 through 5*) precedes this narrative and its appendices (included as *Attachment 6 Supporting Documents*).

2. CITIZEN REVIEW PROCESS

The Applicant initiated a citizen review process for the Project focused on neighbor outreach and communication with potential Project stakeholders including County staff, government agencies, and elected and appointed officials. The Applicant aimed to inform the public about the Project, answer any questions, address any misinformation, and learn what concerns there were regarding development of the Project that can be addressed as Project engineering and permitting advances into the next stages. A separate memorandum summarizing these efforts is provided as **Appendix A**.

3. EXISTING LAND USE

Existing land use at the Project site is limited to open space characterized as primarily vacant land with remnants of residential and agricultural activities. Past land use is evidenced by the presence of septic systems, water wells, a shed, and a dilapidated animal pen.

Land use to the south and southeast of the Project site is natural open space owned by the State of Arizona (**Figure 1**). Land use in other directions surrounding the Project site is sparse, single-family residential development.

4. PLANNED LAND USE

Based on the current Cochise County Comprehensive Plan, the Project site is within Growth Area Plan Designation Category D – Rural Area geared toward providing local services, tourism, or intensive uses not appropriate in more densely populated parts of the county, such as power plants and feedlots (Cochise County 2015). The parcels within the Project site are designated RU-4 Rural. Solar energy power plants may be allowed in rural utility (RU) zones with a Special Use Authorization.

The University of Arizona conducted a Renewable Energy Opportunity Analysis for Pima, Santa Cruz, and Cochise counties in Arizona (UA 2013). This analysis indicated a significant portion of the Project site is suitable for both small-scale (less than 5 megawatts) and large-scale (greater than 5 megawatts) solar facilities (UA 2013). The Cochise County Comprehensive Plan (2015) encourages renewable energy development within the framework provided in University of Arizona's Renewable Energy Opportunity Analysis suitability study (UA 2013). Renewable Energy is identified as an element of the Comprehensive Plan Goals and Policies (Article 1)(E).

5. SCENIC VALUES

Visual concerns associated with the Project include potential impacts to both scenery and sensitive viewers. Impacts to the scenery as a resource are generally based on whether the Project would change the

character of the landscape such that the relative scenic quality of the landscape would diminish. It is assumed the industrial appearance of the Project would contrast with the characteristics of the primarily undeveloped desert landscape and would, therefore, impact the scenic quality of the landscape to some degree. However, viewers for this Project would be limited. Viewers are primarily residents and their travel routes. There are no residences on the south and west sides of the Project site. Several residences are located north and east of the Project site. Structures are located south of the eastern parcel, but they do not appear to be residences. Ground photos from around the Project site are provided as **Appendix B**.

The landscape surrounding the Project is characterized by desert vegetation, agricultural lands and anthropogenic structures including existing transmission lines and ranching related structures such as fencing. There are no wild and scenic rivers, national scenic and/or backcountry byways, national monuments, or other designated scenic areas at the Project site.

Disturbance resulting from construction (dust, movement, etc.) would be temporary and largely short in duration. Visible effects from active construction would diminish significantly after commissioning.

6. NOISE EMMISSIONS

Noise impacts associated with utility-scale solar projects occur primarily during construction. Heavy equipment is needed for site preparation and construction, similar to any construction project. Once operational, electrical discharge from transmission lines, operation of inverters, and the rotation of solar trackers can create humming or buzzing noises, though these noises will be minimal and would not affect any area outside the Project. Cochise County does not have an ordinance addressing noise levels in this zone; however, the Cochise County Zoning Regulations identify noise and vibration violations as public nuisances which are reportable. Noise impacts during operations and maintenance of the Project are expected to be negligible, resulting in no noticeable changes to the current conditions.

7. COMMUNICATION INTERFERENCE

The Project is not expected to interfere with normal radio reception. The Project would operate under Federal Communications Commission (FCC) regulations which require that best engineering principles be used to guard against harmful interference to authorized radio users. For the Project, the level of radio/television/equipment interference would be very low. PV systems equipment such as transformers and electric cables are not sources of electromagnetic interference (EMI) because of their low frequency (typically 60 hertz [Hz]) of operation and PV panels themselves do not emit EMI.

Fort Huachuca is the largest military installation in Arizona, located near Sierra Vista in Cochise County. Fort Huachuca has a long history of providing electronic and communications testing and training for national defense. Their facilities include Buffalo Soldier Electronic Test Range. The Project is located well outside the Buffalo Soldier Electronic Test Range. The Project will comply with all Federal Aviation Administration and FCC rules.

8. WATERS OF THE UNITED STATES (WETLANDS)

The Project site is located within the Whitewater Draw surface watershed. The gradient at the Project site slopes toward the northeast. Stormwater flows follow the surface gradient except where impoundments detain flow.

Surface water features at the Project site were evaluated for their potential to be considered waters of the United States (WOTUS) by the U.S. Army Corps of Engineers (USACE). An Approved Jurisdictional Determination (AJD) request was submitted to the USACE in February 2024 and is under review (**Appendix C**). Surface water features at the Project site are not well developed and are not expected to be considered jurisdictional by the USACE under current regulations.

9. CULTURAL RESOURCES

A Class I cultural resource records review was completed for the Project site and surrounding area. The report shows no significant previous survey coverage within the Project site and identified the remains of historical homesteads/ranching infrastructure in both parcels. The Project site is composed entirely of private lands, there are no federal or state permits/approvals that require a pedestrian clearance survey. However, care will be given to archeological discoveries during construction. Arizona strictly regulates the removal and disposition of human remains and associated funerary objects on private properties. Any discoveries in connection to human remains or funerary objects would result in a temporary stop work order and coordination with the State Historic Preservation Office (SHPO).

10. BIOLOGICAL RESOURCES

A Biological Evaluation was prepared for the Project to assist with documenting federal and state environmental regulation compliance (**Appendix D**). Federal and state agency jurisdiction over sensitive biological resources is described and addressed below. **Section 10.4** provides a summary of voluntary environmental commitments made by the Applicant for the Project. These commitments were developed in coordination with Arizona Game and Fish Department (AGFD) and their recommendations to conserve natural resources and mitigate potential environmental impacts.

10.1. FEDERAL AND STATE PROGRAMS

Laws and policies protecting rare species on private lands in Arizona include the following:

- The U.S. Fish and Wildlife Service (USFWS) administers the Endangered Species Act (ESA) of 1973, as amended. The ESA protects species listed as threatened or endangered from “take” (generally, directly, or indirectly harming or disturbing listed species and/or their habitat). Prior to being listed as threatened or endangered, a proposed listing rule is issued. When agency priorities take precedence over certain listing actions, species may also be designated as candidates, to be evaluated and potentially listed when no longer precluded by higher-priority actions. The ESA also

allows for the designation of critical habitat (areas essential to the survival and recovery of listed species), although designation of critical habitat is not always required when a species is listed. Critical habitat is an administrative designation of a defined area with specific characteristics important to the survival and recovery of a listed species. Designation of critical habitat can affect federal actions, but not state or private actions that do not have a federal nexus.

- The USFWS Division of Migratory Birds administers the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the USFWS. The BGEPA prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs.
- The AGFD manages and conserves wildlife in Arizona. Nearly all take of wildlife is regulated in some manner through the hunting and fishing license system. Arizona does not have a counterpart to the federal ESA, but a list of rare species (Wildlife Species of Concern) was created in 1996 without creating any specific statutory protections for those species. However, hunting regulations are used to provide some protection, and no hunting or capture of Wildlife Species of Concern is currently allowed.
- The Arizona State Wildlife Action Plan (SWAP) provides strategies and conservation actions for managing Arizona's fish, wildlife, and wildlife habitats that are in greatest need of conservation. The current SWAP was updated in 2022 for a 10-year period as funded through a state-federal partnership and grant program. The SWAP identifies several tiers of Species of Greatest Conservation Need (SGCN) based on vulnerability criteria.
- Native plants in Arizona are managed by the Arizona Department of Agriculture (AZDA), which regulates harvest and salvage. Harvest or salvage of most plant species may be permitted or required. Plants listed as Highly Safeguarded may only be taken or salvaged for scientific or conservation purposes and include plants that may become jeopardized or are in danger of extinction throughout all or a significant portion of their ranges and includes plants resident to the state and listed as endangered, threatened, or category 1 in the ESA.

10.2. ENDANGERED SPECIES ACT COMPLIANCE

The Biological Evaluation identified nine species to be evaluated for the Project pursuant to the USFWS Information for Planning and Consultation (IPaC) tool. ESA-listed species analyzed for the Project included jaguar (*Panthera onca*), northern aplomado falcon (*Falco femoralis septentrionalis*), yellow-billed cuckoo (*Coccyzus americanus*, western Distinct Population Segment), Chiricahua leopard frog (*Rana chiricahuensis*), Yaqui catfish (*Ictalurus pricei*), Yaqui chub (*Gila purpurea*), Arizona eryngo (*Eryngium sparganophyllum*) and Wright's marsh thistle (*Cirsium wrightii*). In addition to these eight ESA-listed species one candidate species, monarch butterfly (Danaus plexippus) was evaluated. While northern aplomado falcon is included on the IPaC list, it is considered an experimental population (EXPN) under section 10(j);

therefore, it is treated as threatened under the ESA and is not subject to the take prohibitions of section 9. One species, monarch butterfly, was determined to have an unlikely potential to occur, and the remaining eight ESA species were determined to have no potential to occur. Determinations and supporting citations for these findings are provided in **Appendix D**.

10.3. BGEPA LISTED SPECIES

Of the two BGEPA listed species, golden eagle (*Aquila chrysaetos*) has a potential to occur of unlikely and bald eagle (*Haliaeetus leucocephalus*) has the potential to occur of none within the Project site. Determinations and explanations for these findings are provided **Appendix B**. No take is anticipated for BGEPA covered species.

The Project is not anticipated to potentially affect any other federally listed species or designated critical habitat.

10.4. DAHLIA SOLAR VOLUNTARY ENVIRONMENTAL COMMITMENTS

The Project site was carefully selected to minimize impacts to the environment and the local community. The Project is sited on available private land with few nearby residents in a rural area adjoining existing transmission power infrastructure. While the Project will avoid a federal nexus and thus a formal Environmental Impact Statement (National Environmental Policy Act; NEPA review), the Applicant: 1) commissioned a Biological Evaluation for the Project, and 2) worked with professional biologists to avoid impacts to special-status species, and 3) coordinated with the AGFD to research and discuss effective options to minimize and offset potential negative impacts of the Project to the natural environment. Further input on Environmental Protection Measures (EPMs) may be incorporated as appropriate by direct coordination with AGFD. This section summarizes the resulting commitments made by the Applicant to date.

The Project will conform to all applicable federal, state, and local statutes, regulations, and enforceable plans. Additionally, the Applicant will implement a series of voluntary EPMs designed to: 1) avoid, 2) minimize, 3) restore and 4) offset Project impacts to wildlife and vegetation resources and to enhance habitat values. Project EMPs will be implemented according to these five categories:

1. Special Project Design Features
2. Habitat Enhancement/Wildlife Management
3. Protection of Species Covered under the Migratory Bird Treaty Act
4. Erosion Control and Vegetation Management
5. Fire Prevention

Project EPMs were developed under the following considerations:

- Cochise County zoning regulations (Site Development Standards) for Solar Energy Power Plants.

- Site selection that avoids effects to ESA, BGEPA and MBTA covered species and proposed/designated critical habitats, biodiversity hotspots, modeled wildlife connectivity corridors, and important bird areas.
- Evaluation of construction, operations, and maintenance phases of the Project for conservation opportunities. The construction phase will disturb and displace wildlife; however, once construction is complete, the only activities in the Project site will be occasional equipment maintenance and vegetation management for continued wildlife habitat support.
- Specific species known to occur, or likely to occur in the Project site.
- Mitigation measures previously recommended by USFWS, AGFD and other public agencies for other projects to avoid and/or minimize any impacts to species with potential to occur in the Project site. This includes but is not limited to:
  - AGFD guidelines for solar developments (AGFD 2010).
  - Wildlife-friendly fencing (AGFD 2009a); and
  - Wildlife-friendly development (AGFD 2009b).

10.4.1. Special Project Design Features

The special design features of the Project will incorporate the following EPMs to avoid and minimize impacts to wildlife and habitat resources:

- Of the two types of solar energy technologies available, the Project proposes to use PV power which converts solar energy to electricity using semiconductor material. The other available technology, Concentration Solar Power (CSP), involves mirrors to concentrate the sun's energy to drive steam turbines and will not be used for the Project as it is known to have detrimental impacts to birds.
- To avoid disruption of wildlife behavior patterns and habitat use, lighting will be limited to only that which is needed for human safety. To avoid light pollution and its effect on wildlife, all lighting fixtures will be hooded, shielded, and directed down toward the interior of the Project site except where necessary for safety. To further minimize the impacts of lighting, Project facilities will utilize motion sensors at most fixtures.
- Solar racks will be installed at a low ground cover ratio (GCR) to limit the optical illusion of water. Racks will be no less than 12 feet clear distance, measured from the outer edge of panels between tracker rows to reduce the potential for impacts to avian species.
- PV panels to be used for the Project will employ anti-reflectivity coating, integral to the panel to avoid glare/potential impacts to wildlife.
- Financial assurances in the amount of estimated decommissioning costs will be required pursuant to the Solar Energy Power Plant ordinance regarding clean removal and disposal/recycling of any damaged panels and a decommissioning plan.
- Dust palliative will be applied along Central Highway adjoining the Project site prior to and during construction to ensure dust is mitigated.

- Water consumption for the Project is limited to the construction phase and periodic cleaning of the panels. Water will be sourced from an onsite water well.
- Prior to construction, contractors/crews will be required to participate in a worker environmental awareness training program to educate them on stormwater best management practices, invasive weed management to prevent the spread of noxious and invasive species during construction, and general wildlife avoidance and mitigation measures.

10.4.2. Habitat Enhancement/Wildlife Management

The following EPMs will be implemented to enhance wildlife in the Project site:

- Wildlife-friendly fencing will be established around the Project pursuant to AGFD published guidelines/approval. Security fencing is required around the solar farm footprint for safety and security reasons, and potential disruption to terrestrial wildlife corridors will be mitigated through wildlife-friendly fencing designed to allow/exclude species endemic to the area. Most fencing is chain-link with exclusion fencing at the top to prevent ungulates from becoming trapped in the site and with appropriate gaps at the bottom of the fence to allow small vertebrate and meso-carnivore permeability. The Applicant will also consider the use of a three-stand wildlife fence around the perimeter with more robust fencing limited around the substation.
- A wildlife corridor will be preserved at the Project site where native vegetation will remain in its current condition. This allows additional opportunities for wildlife to cross the Project site while avoiding traffic along Central Highway and has the added value of providing an additional visual screening.
- Though it will not be necessary to mass grade the Project site, trees and bushes will be removed in development areas while herbaceous plants will remain. Herbaceous plants will be mowed and treated to maintain vegetative perennial cover that not only reduces fugitive dust and erosion, but minimizes potential impacts to small mammals, raptors, mesocarnivores, lagomorphs and box turtles.
- If revegetation is required in temporary construction areas, the seed mix will include flowering annual and perennial flowers including local varieties of milkweed to help create suitable foraging habitat for monarch butterflies and bolster potential reproductive habitat (*Asclepias spp*.).

10.4.3. Protection Species Covered under the Migratory Bird Treaty Act

The following EPMs will be implemented to avoid take of birds protected under the MBTA:

- If construction were to occur between March 1 and August 31, a pre-construction nesting bird survey will be completed no more than 10 days prior to vegetation removal activities. Should active bird nests be located, a 50-ft avoidance buffer will be maintained until nests are no longer active.
- If nesting raptors are identified in the Project vicinity, the appropriate spatial buffer listed in the USFWS Guidelines for Raptor Protection from Human and Land Use Disturbances will be

established to avoid disturbance (Romin and Muck 2002). Nest monitoring will occur to allow construction to proceed once birds have fledged.

- As stated above, maintenance of the vegetation at a solar farm is a necessary activity to ensure the arrays are not shaded or damaged. Mowing, masticating and herbicide treatments may be applied to maintain the site. To the extent practicable, mowing shall not occur during the MBTA breeding season. If construction occurs during the breeding season, a qualified biologist will perform a preconstruction survey to determine if nesting migratory birds are present. Note that mowing will be coordinated with spring and monsoonal growing seasons.
- The Project will follow Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) recommendations including adequate separation (spacing or covers) of energized equipment to prevent electrocutions from powerline conductors and substation equipment (APLIC 2006).

10.4.4. Erosion Control and Vegetation Management

The following EPMs will be incorporated to control erosion and sedimentation and to avoid adverse effects on surface water quality:

- Disturbed soil will be scarified to assist with vegetation establishment.
- Existing trees that require removal will be chipped and spread over disturbed land in the Project site to enhance soil stabilization and reduce erosion.
- Areas of temporary disturbance for construction will be re-seeded with native herbaceous species with a focus on pollinator suitable plants.
- Construction equipment will be washed prior to entering the Project work site, and monitoring for noxious weeds will occur after Project completion.
- Removal of large trees will be avoided where practicable (along wildlife corridor and outside building areas).
- Notification will be provided to the Arizona Department of Agriculture to allow salvage of protected native plants on private lands, and the Applicant will coordinate with interested parties on salvage of specific plant materials as practicable.

10.4.5. Fire Prevention

The Applicant will take all practicable precautions to prevent wildland fires and will adhere to any fire restrictions imposed by local entities. Maintenance work will be avoided during fire season to the extent practicable.

- The Applicant will maintain their equipment line in accordance with the National Electric Safety Code (NESC) adopted by the State of Arizona that requires electric utilities to prune vegetation away from line/equipment (North American Electric Reliability Corporation 2021).
- New power poles will be configured from steel rather than wood.

- Work vehicles will not be parked in a manner that blocks access for emergency vehicles.
- Vehicles will not be parked atop tall growing vegetation.
- Each crew will have ready access to fire equipment, including a fire extinguisher and/or portable water pump and shovel.

10.5. BIOLOGICAL CONCLUSION

The Project is not likely to affect any special-status species. No species afforded protection under the ESA are present and none will be affected by the Project. No protected areas, or areas of significant biological wealth are within the Project site, and mitigation measures implemented for burrowing owls and other nesting birds will address potential impacts to those species. A wildlife linkage area will be preserved along the east portion of each parcel.

Potential impacts to wildlife associated with construction and operation of the Project include loss of habitat, temporary displacement during construction, direct mortality of wildlife that are less mobile such as snakes, lizards, and small mammals, and altering, displacing, or disrupting the breeding and foraging behavior of wildlife. These impacts are expected to be minor given the overall footprint of the Project relative to available suitable habitat in the surrounding region, the short-term and relatively benign nature of construction activities required for solar facility installation, and EPMs to be implemented prior to and during construction. Overall, the amount of habitat that will be impacted by Project activities will be minimal in comparison to total available habitat in the general area, and the limited loss of individuals will not impact local populations.

11. DEVELOPMENT STANDARD MODIFICATION REQUESTS

The Project will comply with the published Site Development Standards for Solar Energy Power Plants. No modifications are requested.

12. REFERENCES

Arizona Game and Fish Department. 2009a. Wildlife Compatible Fencing. Phoenix, Arizona: Arizona Game and Fish Department.

_____. 2009b. Wildlife Friendly Guidelines Community and Project Planning. Phoenix, Arizona. February 2009.

_____. 2010. Guidelines for Solar Development in Arizona. Phoenix, Arizona: Arizona Game and Fish Department. March 12, 2010. 33.

Avian Power Line Interaction Committee. 2006. Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006. Washington, D.C. and Sacramento, California: Edison Electric Institute, APLIC, and the California Energy Commission.

Cochise County. 2015. Cochise County Comprehensive Plan. *Amended and Readopted 2015*.

North American Electric Reliability Corporation. 2021. Wildfire Mitigation Reference Guide. January 2021.

Romin, Laura A., and James A. Muck. 2002. Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances. Salt Lake City, Utah: U.S. Fish and Wildlife Service Utah Field Office. January 2002.

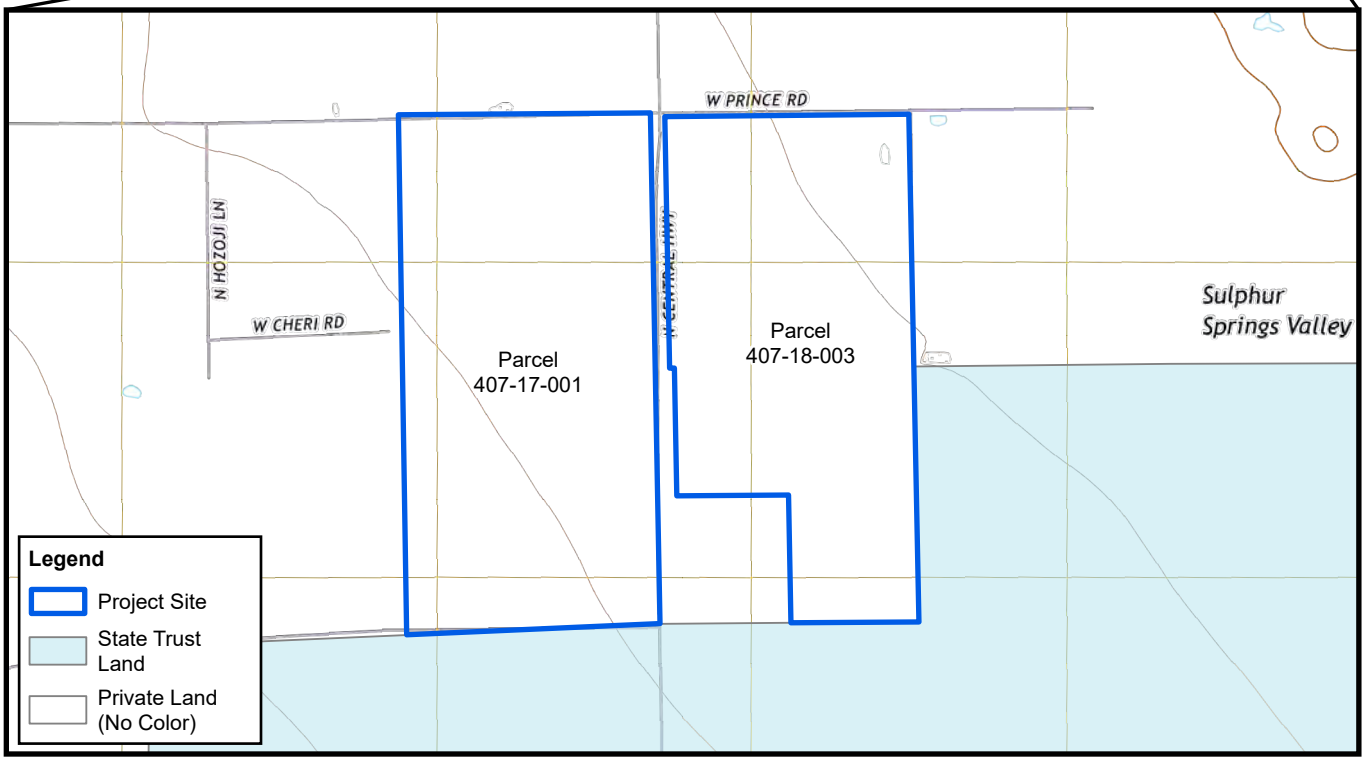
University of Arizona. 2013. Renewable Energy Opportunity Analysis Project Overview Solar Facility Siting Potential for Arizona. Planning and Landscape Architecture Cooperative Extension with the University of Arizona College of Architecture. Tucson, Arizona. October 2013.

FIGURES

ARIZONA

PROJECT VICINITY

Approximate Scale 1 inch equals 12 miles



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Double Adobe USGS 7.5' Quadrangle (2021)
Projection: NAD 1983 UTM Zone 12N
Surface Management: Cochise County
Image Source: ArcGIS Online, World Topographic Map

HORUS ENERGY AZ 1 LLC
Dahlia Solar

Parcels 407-17-001 and 407-18-003

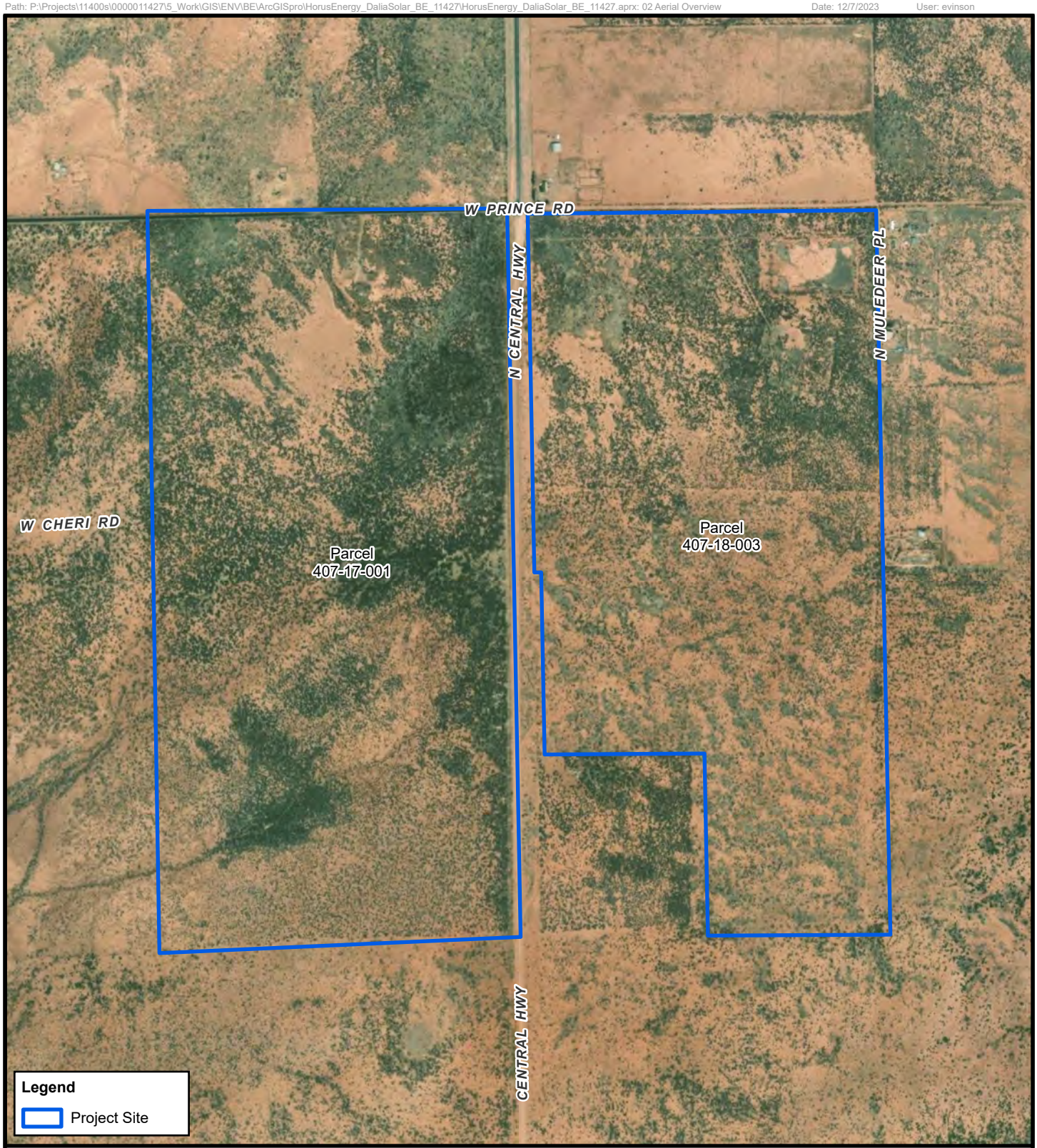
VICINITY MAP
Figure 1

WestLand Engineering & Environmental Services

N

0 1,000 2,000 Feet

0 300 600 Meters



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Projection: NAD 1983 UTM Zone 12N
Image Source: Maxar 03/19/2022

HORUS ENERGY
Dahlia Solar

Parcels 407-17-001 and 407-18-003

AERIAL OVERVIEW
Figure 2

WestLand Engineering & Environmental Services

N

0 500 1,000 Feet

0 150 300 Meters

APPENDIX A
Citizen Review Report

DAHLIA SOLAR PROJECT
CITIZEN REVIEW REPORT

Prepared for: Cochise County, Arizona Planning and Zoning Division

Prepared by: Horus Energy AZ 1 LLC (Horus) and
WestLand Engineering & Environmental Services (WestLand)

Date: April 25, 2024

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Tables

Appendices

1. INTRODUCTION

Horus Energy AZ 1 LLC (Horus; the Applicant) conducted a citizen review process for the Dahlia Solar Project (the Project) focused on neighbor outreach and communication other potential stakeholders including Cochise County (County) staff, government agencies, elected and appointed officials. The Applicant aimed to inform the public about the Project, answer any questions, resolve any misinformation, and learn what concerns there were regarding development of the Project that can be addressed as Project engineering and permitting advances into the next stages.

The Applicant hosted a public open house meeting, contacted agencies likely to be interested in the Project, and developed a Project website. The public was able to call or email members of the Project team using contact information distributed in the open house invitation and Project website. Feedback was received on how the public may view the proposed Project and how the Applicant could optimize the Project. Communication with the public is expected to continue in the time between when this application is submitted and the Special Use Permit hearing.

2. NEWSLETTER MAILING

The Open House notice was dated March 4, 2024, and mailed on March 5, 2024. It provided an overview of the Project and invited the recipients to an open house in Douglas, Arizona. This letter was sent in both Spanish and English (**Appendix 1**). The mailing was sent to:

- Landowners/residents within the County-determined notice area (1500 feet from Project site) (**Appendix 2**), and
- Project stakeholders (**Appendix 3**).

3. IN-PERSON OPEN HOUSE

The format of the meeting was an informal open house held from 5:00 to 6:30 p.m., which allowed community members to review informational displays, and have one-on-one personal communication with members of the Project team to provide comments or ask questions. The meeting consisted of several stations with large maps and text boards with highlighted details of the Project, including the Project's purpose, phases of a solar project, proposed facilities/site plan, ground photos of the projects current condition, proposed sample arrays, water use, and proposed conservation measures. A community brochure was developed and distributed to attendees. Comment forms were available to allow attendees to provide input on the proposed Project. Open House materials are provided as **Appendices 4 through 8**.

- Held on March 21, 2024, at the YMCA Plaza Esmerelda in Douglas, Arizona
- Project team representative from Horus (two individuals) and WestLand (three individuals)
- Nine Project poster boards
- Project information handout

- Map of APS's Service Territories
- Computer station set up to provide Project overview using aerial and parcel basemaps via County GIS website and Google Earth
- Six people signed in. Attendees included private landowners and representatives from the County planner's office and the County Supervisor for District 2.
- Generally, the team responded to questions from participants, as described in Section 1.5.

4. PROJECT WEBSITE

The Project website (https://dahliasolar.com/) was created to provide access to information and electronic versions of distributed materials. Through the website, viewers are also provided contact information for submitting comments or questions. The website address was provided to several individuals during the public open house. A printout of the website is provided as **Appendix 9**.

5. AGENCY COMMENTS AND RESPONSES

The Applicant corresponded with the following agencies listed on our stakeholder outreach list:

- **Department of Defense** (DoD) **Clearing House**—requested additional Project information for future permitting coordination (**Appendix 10**),
- **U.S. Army Corps of Engineers** (Corps)— confirmed receipt of the Clean Water Act Section 404 jurisdictional determination request (**Appendix 11**),
- **Cochise County Emergency Management**—the Applicant contacted the Cochise County Emergency Management Director and prepared a draft Emergency Response Plan for comment (**Appendix 12**). The Applicant intends to continue discussions to determine appropriate Project considerations.
- **Arizona Game and Fish Department** (AGFD)—ongoing coordination. AGFD was invited to review the Applicant's Biological Evaluation and provide recommendations regarding the Project's design and operation. Horus and WestLand have been coordinating with Laura Paulson and Elizabeth James regarding proposed Project conservation measures (**Appendix 13**). The Applicant hosted a virtual meeting on April 25, 2024, with several AGFD staff to discuss solar project recommendations to minimize potential impacts of the Project to the natural environment.

6. PUBLIC COMMENTS AND RESPONSES

The Project team responded to the public: 1) immediately after the open house notice was sent, 2) at the open house meeting and 3) following the open house by responding to calls and reaching out to individuals who left their email or phone number on the Open House sign-in sheet.

Mr. George Morin owns property directly north of the western Project parcel and additional property in the area. He called the Project team ahead of the meeting, attended the meeting and Project representatives called him to follow up after the meeting. He requested additional information about the Project and shared several specific concerns. Concerns raised by Mr. Morin and Project team responses are provided in **Table 1**.

At the open house, individuals spoke with both Horus and WestLand representatives. Comments and responses are summarized in **Table 2**. A letter of support from a neighbor was provided during the public meeting, please see **Appendix 14.** No additional written comments were provided.

After the open house, the following message was received from the Dahlia Solar Project website but when we attempted to contact this individual via the email address provided, the message was not deliverable:

Name: Kenny Mulkey
Email: kenny.mulkey@hotmail.com
Message: Hello, I have a question

Table 1. Neighbor Questions and Responses

Comment/Question	Response
Concerned that the Project will result in property tax increases for neighboring properties.	We do not have any information on how property taxes may be impacted.
Concerned that the Project will impact property values (decrease values for nearby properties in the future)	There are studies suggesting property values can be affected in either direction or not affected at all. Polled respondents in research studies have reported that since the expected lifetime of a solar facility is at least thirty years, residents have assurance the nearby land will not be redeveloped for an unfavorable use. Property values can actually be affected in a positive way too.
Advises against the Project because there are likely to be a lot of expensive challenges, he believes the developer needs to think through more thoroughly including dust from tracks on the road, stormwater flows across the property and roads, and the expense of additional unforeseen challenges with the land. He offered to meet us onsite and discuss several items he believes we are likely not to be aware of.	We understand there is expected to be a considerable investment to develop the land for solar generation and that the Project site may present challenges. We welcome additional input from people more intimately familiar with the area.
There are two stands of “blackbrush” at the Project site; it’s rare to see it elsewhere in the entire valley. It would be a shame to destroy it.	Our field biologists identified many species on the site. Species rare to the desert region are often found in stormwater impoundments where additional water saturation helps plants establish. Plants observed at the Project site are listed below. We did not identify any threatened or endangered species on the Project site. We will notify the Arizona Department of Agriculture when we plan to clear vegetation. • Prosopis glandulosa (Honey mesquite) – dominant subcanopy throughout Project area • Flourensia cernua (Tarbush) – frequent subcanopy associate throughout Project area • Baccharis sarothroides (Desert broom) – infrequent • Cynodon dactylon (Bermuda grass) – patchy • Hopia obtusa (Vine mesquite) – patchy • Bouteloua curtipendula (Sideoats grama) – infrequent • Aristida ternipes (Spider grass) – patchy • Bothriochloa barbinodis (Cane beardgrass) – infrequent • Solanum elaeagnifolium (Silver nightshade) – patchy • Lycium sp. (Wolfberry) – infrequent • Yucca elata (Soaptree yucca) – infrequent • Gutierrezia sarothrae (Broom snakeweed) – patchy • Atriplex canescens (Fourwing saltbush) – scattered, patchy • Sporobolus wrightii (Big sacaton) – patchy, dominant grass in project area • Cylindropuntia spinosior (Cane cholla) – infrequent, only cactus sp. in project area • Ailanthus altissima (Tree of heaven) – non-native, infrequent • Vachellia constricta (Whitethorn acacia) – patchy, occasionally dominant canopy in project area • Celtis reticulata (Netleaf hackberry) – patch canopy associate, in claypan depression • Sideroxylon lanuginosum (Gum bumelia) – patch canopy dominant, in claypan depression • Ziziphus obtusifolia (Graythorn) – patch subcanopy dominant, in claypan depression

Comment/Question	Response
	• Hilaria mutica (Tobosa grass) – patchy adjacent to claypan depression • Prosopis velutina (Velvet mesquite) – 1 individual observed in claypan depression • Xanthium strumarium (Rough cocklebur) – annual, patchy, in cattle tank • Muhlenbergia porteri (Bush muhly) – infrequent in east Project area • Dasyochloa pulchella (Desert fluffgrass) – infrequent in east Project area • Hesperostipa neomexicana (New Mexico feathergrass) – patchy
Floodwater and drainage impacts. – will county consider panels impervious area?	A drainage study is expected to be required for approval of the development plan and would assess if there were any needed design measures to avoid potential downstream flow changes.
Will any special grants fund the Project/will taxpayers indirectly support the Project?	There are no plans to use grant funding for the Project. This Project is being funded privately. No special property tax exemptions are being granted by the County. An agreement between Horus and the utility company will outline shared costs and the responsibilities of future costs such as operation and maintenance. The utility company is responsible for managing and reporting rate changes.
Regarding the power transmission network and use of power generated onsite… where will it go and be distributed? How does the system energy flow work?	Generally speaking, the power is likely to be used by APS within their SE AZ service territory as it will serve the closest load need. However, any utility provider who has transmission rights on the APS system can buy the power. Where and when the power is used will depend on several factors and is up to APS. We expect the power to be used in the immediate area when power is being generated.
Does not support utility-scale solar development in this area. Supports other clean energy generation such as nuclear and natural gas.	Solar power is a clean source of energy, especially when compared to alternative sources of electricity. In the Southeast, our electricity has traditionally come from fossil fuel sources, like coal-fired power plants, which produce negative environmental impacts, from dirty air to coal ash waste to overburdened water resources and carbon emissions. By contrast, solar power generation is largely carbon and pollution-free. Even when considering lifecycle greenhouse gas emissions—those that occur from manufacturing, operation, maintenance, and decommissioning solar facilities—solar generation produces less than one twentieth of the emissions of coal generation. Solar energy not only generates fewer lifecycle greenhouse gas emissions than coal, but also uses much less water.

Table 2. Open House Questions and Responses

Comment/Question	Response
Storm water flows: It is important to ensure downstream water rights are maintained (prefer to continue to have sheet flow across their property).	We understand that surface and ground water are a precious resource. We do not plan to use water collection systems onsite that would preclude the flow of downstream stormwater. We do not anticipate mass grading the Project site, so stormwater flows are not expected to be dramatically impacted.
We would prefer the preservation of trees onsite if possible; trees are a resource in the desert and take a long time to grow. Can the layout avoid the established trees onsite?	There are designated areas onsite where natural vegetation will remain completely intact and not be trimmed down (i.e., the NE corner of each parcel and natural open space corridors along the east boundary of each parcel). Vegetation growing where roads and panels are planned will need to be trimmed/removed for operation of the solar generation facility. We will review the layout to explore if it is feasible to modify row lengths. [*This item included follow-up with solar engineer and project biologist. It was determined that removal of the gum bumelia and soapberry trees would be necessary except where they are going in a wildlife corridor. It was determined it would not be practical to leave trees onsite due to shade, the potential for root systems damaging the solar system and the manner in which these systems are typically installed. However, if the trees or other vegetation is removed, herbaceous ground cover will be seeded*].
Why was this site selected?	The Project site is situated adjacent to an existing transmission line so it would not be necessary to build additional power infrastructure. The site also avoids public lands, and natural resources such as waters of the U.S., and threatened and endangered species. This land use offers low-water intensity and is permitted in this zone with a special use permit.
Dust control for neighbors.	Dust suppression is important for the operation of the system and to be a good neighbor. The County is expected to require us to maintain the site with perennial groundcover and/or apply dust treatment.
Not wanting anything onsite; can we select an alternative site; even better to use one that has little vegetation.	There are several factors considered when selecting a solar power generation site including proximity to a transmission line, flat ground, and availability of the property. The Applicant did evaluate multiple properties but there were no other properties in the immediate area that met the necessary criteria.
What will vegetation trimming involve; will you use herbicides? Concerned mesquites will be difficult to remove, suggest it may require additional ground disturbance to dig up roots.	There are multiple methods we may use to clear/trim vegetation in the areas that will be developed. This includes application of herbicide, digging up large trees, mowing and masticating, depending on the vegetation. After the meeting, Horus discussed this item with Project biologist. While shrubs may be easy to remove/trim on a regular basis, mesquite trees may require more maintenance or could be removed with a portion of the root and crushed in place. It will be necessary to have herbaceous groundcover take over where ground disturbance occurs. The goal is to retain naturally occurring native vegetation and mow vegetation that will conflict with the solar equipment. Grassland is expected to establish in disturbed soils. There may need to be a noxious weed management plan to keep weeds from taking over disturbed area.
A neighbor inquired about the use of cut mesquite for fencing or planting honey mesquite to provide a screening for neighbors.	Horus discussed this idea with the Project biologist. Use of mesquite for fencing is not preferred since it would provide fuel for wildfire. Planted trees would take 10-15 years to grow enough for screening and it is likely that multiple trees would not survive the planting. Additionally, irrigation would be needed for plantings for at least the first 2 years

Comment/Question	Response
	as they are established. This would increase water use for the Project. Trees would also need to be placed a distance from the arrays.
Why is a foreign company investing in southern AZ?	The applicant's company headquarters is in London with local presence in New York and Austin. They have projects in the US, Canada, and Europe. The Project will provide power to APS who has a local service area.
Will an Environmental Assessment of Environmental Impact Statement be completed?	The Project does not cross federal land, use federal funds, or require federal permits. National Environmental Policy Act (NEPA) review is not required but our biological evaluation includes an analysis of impacts to the environment and provides conservation measures to minimize impacts to the environment.
Who owns this land?	There are two parcels comprising the Project site, both are private landowners. The western parcel is being leased by Horus and the eastern parcel was purchased by Horus under AURUM HOLDINGS INC.
Discussions of permitting process and future opportunities to provide comment; the notification for a public hearing.	The solar area will require zoning approval through a Special Use Permit; this includes citizen outreach and Planning and Zoning Commission approval. The Project is subject to certain site development standards and special conditions may be imposed. Other local approvals may include Floodplain Use permit, Grading and Drainage plan approval, Dust Control permit, and Fencing and Building permits. We expect to submit the Special Use Permit application in April 2024 in time to be on the P&Z Commission hearing the second Wednesday in June. This process will involve notification of neighbors.
Appreciation of setbacks and wildlife conservation measures.	Solar farm development must comply with a host of federal and state environmental laws. The Project also requires a Special Use Permit from the County. The goal for that permit is to balance local community needs and prevent adverse impacts, while preserving landowners' rights to make clean energy investments on their property. Additionally, the Project aims to incorporate efficient land use: It also avoids environmentally sensitive areas, reserves natural resources onsite as much as possible, aims to provide buffer for some neighbors, provides wildlife corridors, and makes use of existing transmission infrastructure. It avoids critical habitat and sensitive wildlife areas as well as stream and wetland impact and the Project will implement best practices for preventing erosion and sedimentation during site construction activities. The Project will implement sustainable grounds keeping- no supplemental planting. Maintain low-grow native species (shrubs and groundcovers, such as grasses and wildflowers) which improves erosion control, pesticide avoidance, stormwater infiltration, wildlife habitat, and reduced overall maintenance.
Appreciation for increased surveillances and property fencing due to problems with illegal immigrant traffic in the area.	New fencing will be installed, and surveillance will likely be located near substation equipment.
Will local companies be used during construction?	The Project will generate property taxes over its 40–50-year life and create numerous temporary jobs for construction. The procurement and construction management contractor are likely to utilize local companies for labor and materials such as stone for internal roads and fencing round the perimeter.
Access from Central Hwy is preferred rather than Price Road	This is noted. Access points have not been determined yet.

APPENDIX 1
Project Newsletter with Open House Invitation in English and Spanish

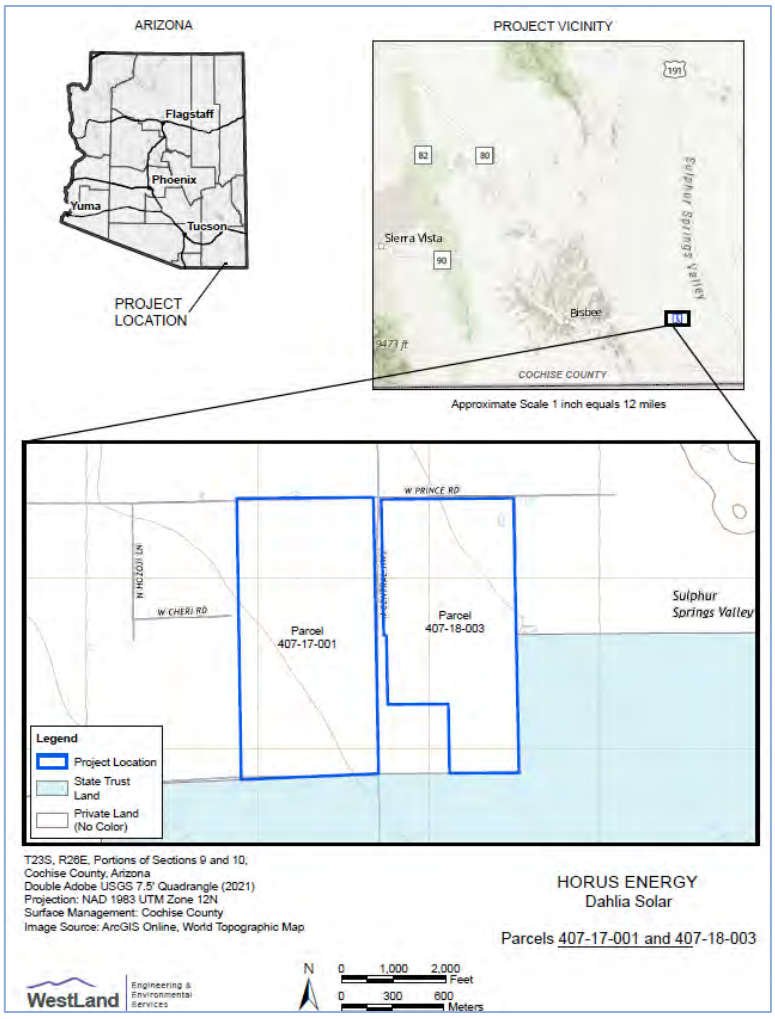
HORUS ENERGY

March 4, 2024

Dear Stakeholder and Neighbor,

Horus Energy AZ 1 LLC (Horus Energy) is proposing the Dahlia Solar Project in unincorporated Cochise County, Arizona. The Dahlia Solar Project would be located on an approximately 591-acre property that spans the existing roadway of Central Highway at 4283 and 4355 W. Price Road, McNeal, AZ (parcels 407-18-003 and 407-17-001); see location maps.

The proposed Project consists of the development of an 80-megawatt photovoltaic (PV) array, a switchyard, interior access roads, an operations and maintenance building, and a short generation interconnection to connect to the existing APS regional electric transmission grid onsite. Project construction is expected to take approximately 12 to 18 months and begin in 2027. Construction would include mobilization, pre-construction surveys, mowing/vegetation removal with minimal grading and site preparation, installation of drainage and erosion controls, PV panel/tracker assembly, and general facility construction. Access to the project area would use existing public surface streets. The solar array will require approval through a Cochise County Special Use Permit.



The public is invited to attend our open house to learn more about the Dahlia Solar Project. Horus Energy is happy to share our project plans with the community. We will have informational displays including representative photographs of the solar array, project layout, resource investigations and additional project details. This is an opportunity to ask questions and submit any comments or concerns. Representatives from Horus Energy and their consultants (WestLand) will be available to review our work on the project. If you are interested in learning more or have any questions, we welcome your attendance at the following location, date, and time:

YMCA "Plaza Esmeralda" 1000 N. Pan American Avenue, Douglas, AZ 85607
Thursday, March 21, 2024
5:00 PM – 6:30 PM

To provide comments directly, please contact Diana Sandoval at dsandoval@westlandresources.com or 520-206-9585.

We welcome your input and questions. Please do not hesitate to reach the project team at the contact information provided.

Sincerely,
Mark Prichard, Senior Project Manager
Georgi Velkov, Senior Advisor
Horus Energy

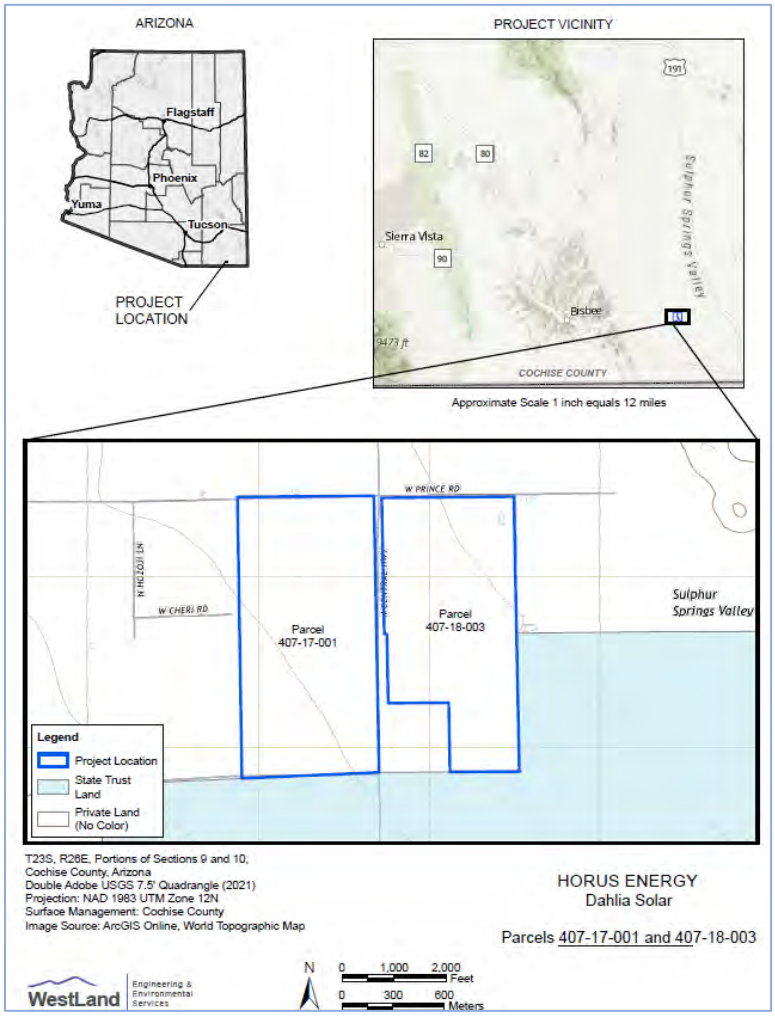
HORUS ENERGY

4 de Marzo de 2024

Estimado interesado y vecino,

Horus Energy AZ 1 LLC (Horus Energy) está proponiendo el Proyecto Solar Dahlia en el condado no incorporado de Cochise, AZ. El Proyecto Solar Dahlia se ubicaría en una propiedad de aproximadamente 591 hectáreas que abarca la carretera existente de Central Highway en 4283 y 4355 W. Price Road, McNeal, AZ (parcelas 407-18-003 y 407-17-001); consulte los mapas de ubicación.

El proyecto propuesto consiste en el desarrollo de una matriz fotovoltaica (PV) de 80 megavatios; una subestación eléctrica; caminos de acceso internos; un edificio de operaciones y mantenimiento y una interconexión de generación corta para conectarse a la red de transmisión eléctrica regional de APS existente en el lugar. Se espera que la construcción del proyecto tome aproximadamente de 12 a 18 meses y comience en 2027. La construcción incluiría movilización, encuestas previas a la construcción, siega/eliminación de vegetación con un mínimo de nivelación y preparación del sitio, instalación de controles de drenaje y erosión, montaje de paneles/fotovoltaicos, y construcción general de las instalaciones. El acceso al área del proyecto utilizaría calles públicas existentes. La matriz solar requiere la aprobación a través de un Permiso de Uso Especial del Condado de Cochise.



Se invita al público a asistir a nuestra jornada de puertas abiertas para obtener más información sobre el Proyecto Solar Dahlia. Horus Energy está encantado de compartir nuestros planes del proyecto con la comunidad. Tendremos exhibiciones informativas que incluirán fotos representativas de la matriz solar, el diseño del proyecto, investigaciones de recursos y detalles adicionales del proyecto. Esta es una oportunidad para hacer preguntas y presentar cualquier comentario o inquietud. Representantes de Horus Energy y sus consultores (WestLand) estarán disponibles para revisar nuestro trabajo en el proyecto. Si está interesado en obtener más información o tiene alguna pregunta, le damos la bienvenida a su asistencia en la siguiente ubicación, fecha y hora:

YMCA "Plaza Esmeralda" 1000 N. Pan American Avenue, Douglas, AZ 85607
Jueves, el 21 de marzo de 2024
5:00 PM – 6:30 PM

Para enviar comentarios directamente, comuníquese con Diana Sandoval en dsandoval@westlandresources.com o al 520-206-9585. Si quiere hablar con alguien en español, por favor dirija sus comentarios a Greg Taylor (correo electrónico: gtaylor@westlandresources.com o al 602-834-1171).

Agradecemos sus comentarios y preguntas. No dude en comunicarse con el equipo del proyecto a través de la información de contacto proporcionada.

Atentamente,
Mark Prichard, Director del Proyecto
Georgi Velkov, Asesor Senior
Horus Energy

APPENDIX 2
County-Provided Project Notification Mailing List

OWNER_NAME1	APN	ADDRESS1	ADDRESS2	CITY STATE ZIP_CODE
REES DAVID S & KIMBERLY	40718001B		4157 W PRINCE RD	MCNEAL, AZ 85617
CHRISTIANSON SHELLY	40718002		PO BOX 4505	BISBEE, AZ 85603
TOENIES MARK M & LYMY BETH D	40717001		63 CIRCULO VERDUGO	RIO RICO, AZ 85648
COLLINS ROSE RESIDENCE TRUST	40717004G		1701 E CALLE DEL CIELO	TUCSON, AZ 85718
KONRATH LUCIA BOND	40710008		747 E 79TH ST	SAFFORD, AZ 85546
KAVANAGH KRISTIAN JOHN	40717004H		1432 COUNTY ROAD 103	SMILEY, TX 78159
VIGNE FERDINAND JR VIGNE JULES P	40707001	C/O STEVE VIGNE	38 MIRAGE COVE DR	RANCHO MIRAGE, CA 92270
MORIN GEORGE E & LINDA D LIVING TRUST	40711009A		4952 W DOUBLE ADOBE RD	MC NEAL, AZ 85617
CHRISTIANSON SHELLY	40718005		PO BOX 4505	BISBEE, AZ 85603
N&B CATTLE LLC	40717002E		PO BOX 157	MC NEAL, AZ 85617
POTGIETER DIANE JOY & PIERRE	40710009		4300 W PRINCE RD	MC NEAL, AZ 85617
WALLER MICHAEL N & SARAH A LIND	40718006		1177 W SMITH RD	BELLINGHAM, WA 98226
N&B CATTLE LLC	40717002F		PO BOX 157	MC NEAL, AZ 85617
LONG KATHLEEN E	40718001E		6809 N MULEDEER PL	MC NEAL, AZ 85617
AURUM HOLDINGS INC	40718003		16730 CREEK BEND DR	SUGAR LAND, TX 77478
EMORY JEFFREY L & ANGELES REV TR	40711010		3615 E YOKUT ST	SIERRA VISTA, AZ 85650
KAVANAGH KRISTIAN JOHN	40717004F		1432 COUNTY ROAD 103	SMILEY, TX 78159
TOLLY DONALD	40710007A		6919 N CENTRAL HWY	MC NEAL, AZ 85617
ROBINSON JAMES L	40718001(	C/O KATHRYN DEMAR	6827 N MULEDEER PLACE	MCNEAL, AZ 85617
ROMERO ROBERT E	40718004		P O BOX 826	DOUGLAS, AZ 85608
MORIN GEORGE E	40717002C		4952 W DOUBLE ADOBE RD	MC NEAL, AZ 85617
BAKER DANNY	40711001		4440 W PRINCE RD	MCNEAL, AZ 85617
ELLIOTT MICHAEL O ETAL	40717005		7812 E CAMINO MONTARAZ	TUCSON, AZ 85715
DOGWOOD REVOCABLE LIVING TRUST	40718007		PO BOX 5	MCNEAL, AZ 85617

APPENDIX 3
Mailing List of Project Stakeholders
(email and mailing list)

Organization	Last	First	Title	Address	City	State	Zip	Note
FEDERAL								
U.S. Army Corps of Engineers								see email address below
Ft Huachuca								see email address below
Office of U.S. Congressman, District 6	Ciscomani	The Honorable Juan		1636 N. Swan Rd., Suite 200	Tucson	AZ	85712	
Office of U.S. Senator Kyrsten Sinema	Kimball	Troy	Constituent Affairs Representative	20 E. Ochoa St	Tucson	AZ	85701	
Office of U.S. Senator	Kelly	The Honorable Mark	District Director	1661 N. Swan Rd., Suite 238	Tucson	AZ	85712	
STATE								
Project Evaluation Program, Habitat Branch Arizona Game and Fish Department								see email address below
Governor Katie Hobbs	Marisol	Flores-Aguirre	Southern AZ Director	400 W Congress St., Suite 504	Tucson	AZ	85701	
Arizona State Representatives	Griffin	The Honorable Gail	AZ State House of Representatives, District 19	1700 W Washington St, Room 225	Phoenix	AZ	85007	
Arizona State Representatives	Diaz	The Honorable Lupe	AZ State House of Representatives, District 19	1700 W Washington St, Room 302	Phoenix	AZ	85007	
Arizona State Representatives	Gowan	The Honorable David	Arizona State Senate, District 19	1700 W Washington St, Room 300	Phoenix	AZ	85007	
Arizona Department of Transportation	Emery	Todd	Southeast District Administrator	2082 E. US Highway 70	Safford	AZ	85546	
Arizona Department of Transportation Historic and Scenic Roads	Ligocki	Clemenc	Planning and Program Manager					see email address below
Arizona State Parks and Recreation Department	Broscheid	Bob	Executive Director	23751 N 23rd Ave, #190	Phoenix	AZ	85085	
Office of the Governor	Hobbs	The Honorable Katie	Governor	1700 W Washington St. #230	Phoenix	AZ	85007	
LOCAL								
Cochise County Board of Supervisors	Judd	Peggy	District 3 Supervisor, Vice-Chairman	1415 Melody Lane Building G	Bisbee	AZ	85603	
Cochise County Board of Supervisors	Crosby	Tom	District 1 Supervisor	1415 Melody Lane Building G	Bisbee	AZ	85603	
Cochise County Board of Supervisors	English	Ann	District 2 County Supervisor, Chairman	1415 Melody Lane Building G	Bisbee	AZ	85603	Email and phone follow-up on 3/13/24
Cochise County Public Works	Faccio	Jason	Director of Public Works	1415 Melody Lane Building F	Bisbee	AZ	85603	
Cochise County Engineering & Natural Resources/Flood	Watkins	Jackie	Director	1415 Melody Lane Building F	Bisbee	AZ	85603	
Cochise County Sheriff	Dannels	Mark	Sheriff	205 N Judd Drive, Mile Post 345, Highway 8	Bisbee	AZ	85603	
BISBEE-DOUGLAS INT. AIRPORT								Daniel Coxworth is contact, see email below
UTILITIES								
APS	Theresa	Guerrero	Transmission Contracts & Services Consultant					see email address below
AEPCO	Thatcher	Kathy	President of the Board	1000 S. Highway 80	Benson	AZ	85602	
SSVEC	Nolan	Curtis	Board President	350 N. Haskell Drive	Willcox	AZ	85643	

EMAIL								
osd.dod-siting-clearinghouse@mail.mil	To whom it may concern	Department of Defense Program Email						Standard response received with directive to provide specifics for project review.
kathleen.a.tucker@usace.army.mil	Tucker, Kathleen	ACOE PM for Cochise County						Sent from Approved Jurisdictional Determination review request submittal email chain
cligocki@azdot.gov	Ligocki, Clemenc	ADOT Historic and Scenic Roads						
rbuss@azland.gov	Ronda Buss	Arizona State Land Department - Planning Division						
pep@azgfd.gov	To whom it may concern	Arizona Game and Fish Department project evaluation program email						Sent emails to Project contacts as well.
Theresa.Guerrero@aps.com	Guerrero, Theresa	Transmission Contracts & Services Consultant						
CMcLachlan@cochise.az.gov	McLachlan, Christine	Cochise County Planning Division Manager						
MTaylor@cochise.az.gov	Taylor, Matthew	Cochise County Planner						
dcoxworth@cochise.az.gov	Coxworth, Daniel	Director, County Dev Services						
dduchon@cochise.az.gov	Duchon, Daniel	Director, County Emergency Management						Sent draft Emergency Response Plan and corresponded regarding Dahlia Solar Project presentation to Local Emergency Planning Committee meeting in the future.

APPENDIX 4
Open House Sign-in Sheet

HORUS ENERGY

Dahlia Solar Project Open House

Sign-in Sheet

Name	Mailing Address	Phone Number	Email
PIERRE POTGIETER	4300 W PRINCE Rd McNeal	(423) 9870831	nguni cattle@hotmail.com
Matthew Taylor	Cochise County	5204329256	
Jeff Emory	Sierra Vista/McNeal	5202495556	
Ben + Noel Carruthers	6880 N. Indian Pl. McNeal	5207320116	
Ann English	6850 N. Brooks Rd McNeal	5205593768	aenglish@cochise.az.gov

APPENDIX 5
Open House Comment Form

Dahlia Solar Project - Comment Form

Name

Organization (if applicable)

Address

City State Zip code Email

Would you like a representative to follow up with you on your questions or comments? Yes ☐ No ☐

COMMENTS:

Submit in person or by email to dsandoval@westlandresources.com

APPENDIX 6
Open House Handouts

HORUS ENERGY

DAHLIA SOLAR PROJECT, COCHISE COUNTY, ARIZONA

The Dahlia Solar Project is a proposed 75-megawatt solar facility located on approximately 590 acres of privately-owned rural land. The project site spans the existing roadway of Central Highway at 4283 and 4355 W. Price Road, McNeal, AZ (parcels 407-18-003 and 407-17-001).

The project will produce enough energy in the daytime hours to power nearly 15,000 homes. This project will provide valuable capacity to the region and its energy users. The Dahlia Solar Project will connect to the existing APS regional electric tranmission grid onsite.

PROJECT FACTS

	The Dahlia Solar Project is expected to create jobs during construction and plans to utilize local companies for labor and materials.		The project site will produce tax revenue over the 40 year life of the project that will directly benefit Cochise County.
	Wildlife linkages will be integrated into the site plan which will provide a vegetative visual screening on the east side of each parcel.		The project site will not be mass graded. Trees and bushes may be removed or trimmed while herbaceous plants will remain. Herbaceous plants will be mowed to maintain vegetative perennial cover minimizing fugitive dust and erosion.
	Solar projects operate quietly and can be monitored remotely, making them great neighbors. Once constructed, site visits are limited for occassional maintenance on equiptment.		To avoid light pollution for neighbors and wildlife, all lighting fixtures will be hooded, shielded, and directed down toward the interior of the site except where necessary for safety. Lighting will utilize motion sensors at most fixtures.
	Solar panels are safe for people, animals and the environment. They do not generate odors or emissions and do not pose a health risk. Damaged panels are immediately removed and replaced.		Modern solar panels are optimized to absorb sunlight and convert energy. The panels incorporate an anti-reflective coating, integral to the panel to avoid glare.
	When the project is decommissioned, the panels will be removed and the site will be restored based on an approved decommissioning and reclaimation plan.		Solar arrays use minimal water. Once the project is constructed, the only water use will be for occasional panel cleaning.
	This project site was selected for its strong solar power generation potential, flat topography and proximity to the transmission power grid.		Dust palliative will be applied along Central Highway, adjoining the Project Area prior to, and during construction to ensure dust is mitigated.

APPENDIX 7
Open House Posters

HORUS ENERGY

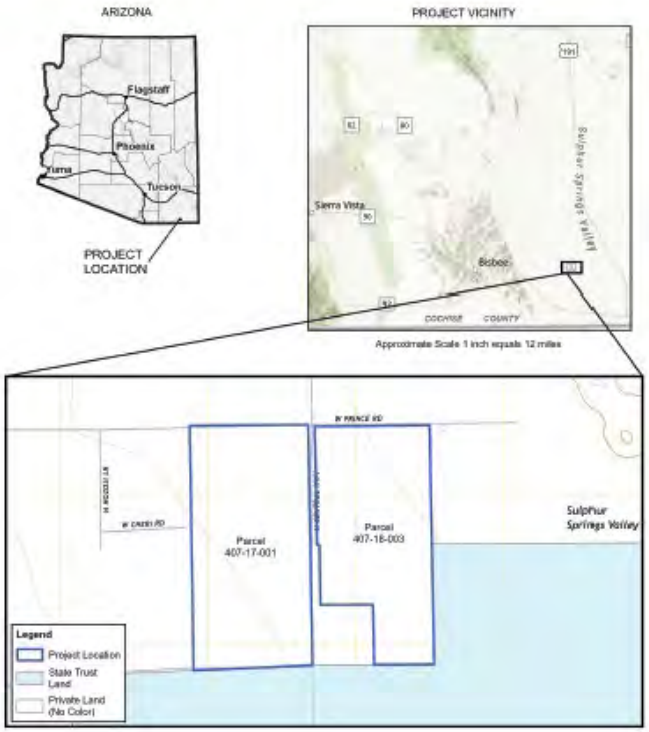
WELCOME TO HORUS ENERGY'S

DAHLIA SOLAR PROJECT

OPEN HOUSE

HORUS ENERGY

DAHLIA SOLAR PROJECT LOCATION



- West of HWY 191, North of HWY 80
- Adjoins State Trust Land to the south and private land to the north, east and west
- Approx. 7 miles north of Arizona/Mexico border
- Approx. 5.5 miles west of Bisbee-Douglas Airport
- Approx. 7.5 miles south of Whitewater Draw Wildlife Area

HORUS ENERGY

DAHLIA SOLAR PROJECT PHASES

PHASE 1: Site Selection

- Identify available property proximate to transmission line
- Confirm viability of utility power agreement
- Identify critical issues for property development including environmental and engineering constraints:
  - Adequate area
  - Flat topography
  - Un-contaminated land
  - Avoids public lands
  - Avoids natural resource impacts
- Lease/purchase land

PHASE 2: Project Permitting

- Secure regulatory approvals for entitlement
  - Planning & Zoning
  - Right of Way
  - Cultural Resources
  - Biological Resources
  - Section 404 Washes
- Secure construction permits
  - Stormwater Mgmt.
  - Development Plan
  - Building Permits
  - Floodplain
  - NOI to Clear Land

PHASE 3: Site Preparation

- Pre-construction surveys
- Crew training
- Treatment of unpaved access roads (dust palliative)
- Clear/grade internal roadways
- Trim/mow vegetation
- Rows of posts placed in the ground
- Equipment deliveries
- Temporary traffic
- Use of machinery limited to daytime hours

PHASE 4: Equipment/ Electrical Install

- Install mechanism to move solar panels
- Begin installing electrical equipment
- Panels are installed on racking by construction crew
- Install cable in trench
- Electric crews onsite for installation
- De-mobilization of large construction equipment

PHASE 5: Commissioning

- Inspections of installed equipment
- Power testing
- Site safety testing and training
- Dahlia becomes operational

DECOMMISSIONING

- Follows approved decommissioning plan, approved by the county
- Bonded, based on final engineering and site plan

HORUS ENERGY

DAHLIA SOLAR PROJECT

Sample Photovoltaic Tracker and Array

- Panel ground cover ratio is designed at 34%; the distance between panels will be at least 12 feet.
- Panels are designed to absorb the sunlight, not reflect it.
- The generation equipment is quiet; noise studies for similar equipment indicates there will be no detectable noise from adjoining properties.
- Solar arrays do not produce odors or emissions.

- The facility will be monitored remotely with only occasional site visits necessary.
- Ground-mount installation (direct embed); no concrete foundations needed.

HORUS ENERGY

DAHLIA SOLAR PROJECT

Sample Photovoltaic Tracker and Array

Location: East project parcel, view north
Notes: Chihuahuan desert scrub vegetation, southcentral portion of east parcel of project site

Location: East project parcel, view northeast
Notes: Grass (spider grass)-dominated floor of abandoned livestock tank, northeast corner of east parcel of site.

Location: East project parcel, view west
Notes: Sparse cover of Chihuahuan desert scrub vegetation, southeast portion of east parcel of project site.

Notes: Intersection of N Central Highway and W Prince Road; east parcel of project site (photo left), west parcel (photo right).

Location: N Central Highway, view north
Notes: View along N Central Highway near central portion of project site; western parcel (photo left), eastern parcel (photo right).

Location: East project parcel, view southwest
Notes: Drainage ditch, east side of N Central Highway (photo background) near northwest corner of east parcel.

Location: West project parcel, view north
Notes: Grass (big sacaton)-dominated area within Chihuahuan desert scrub vegetation, northcentral portion of west parcel of project site.

Location: West project parcel, view north
Notes: Stand of small trees (gum bumelia, soapberry) within Chihuahuan desert scrub vegetation, northeast portion of west parcel of project site.

Location: West project parcel, view northwest
Notes: Barren/disturbed land, northern portion of west parcel of project site.

HORUS ENERGY

DAHLIA SOLAR PROJECT HIGHLIGHTS

Solar power generation systems must comply with a host of federal and state environmental laws. The project also requires a Special Use Permit from the county. The goal for that permit is to balance local community needs and prevent adverse impacts, while preserving landowners' rights to make clean energy investments on their property. The project will produce enough energy in the daytime hours to power nearly 15,000 homes. Additionally, the Dahlia Solar Project aims to incorporate:

					
Efficient land use that reserves natural resources onsite as much as possible. Provides an additional buffer for many neighbors while incorporating a natural wildlife corridor. Makes use of existing transmission infrastructure.	Avoidance of critical habitat and protection of sensitive wildlife areas.	Avoidance of stream and wetland impacts, and altercation of existing drainage systems. Will implement best management practices for preventing erosion and sedimentation during site construction activities.	Soil disturbance minimization and maintain the natural contour of the site.	Sustainable grounds keeping - no supplemental planting or irrigation.	Maintenance of low-grow native species (shrubs and groundcovers, such as grasses and wildflowers) which improves erosion control, pesticide avoidance, and improves stormwater infiltration.

HORUS ENERGY

DAHLIA SOLAR PROJECT

Environmental Protection Measures

Special Project Design Features

- Lighting will be limited to only that which is needed for human safety. Lighting fixtures will be hooded, shielded, and directed down except where necessary for safety. To further minimize the impacts of lighting, Project facilities will utilize motion sensors at most fixtures.
- Solar racks will be installed at a low ground cover ratio (GCR). Racks will be no less than 12 feet clear distance, measured from the outer edge of panels between tracker rows, to reduce the potential for impacts to avian species.
- PV panels to be used for the Project will employ anti-reflectivity coating, integral to the panel to avoid glare/potential impacts to wildlife.
- Financial assurances in the amount of estimated decommissioning costs will be in place prior to construction, as required by the Solar Energy Power Plant ordinance regarding clean removal and disposal/recycling of any damaged panels and a decommissioning plan.
- Dust palliative will be applied along Central Highway adjoining the Project Area prior to and during construction to ensure dust is mitigated.
- Water consumption for the Project is limited to the construction phase and periodic cleaning of the panels. Water will be sourced from an onsite water well.
- Prior to construction, contractors/crews will be required to participate in a worker environmental awareness training program to educate them on stormwater best management practices, invasive weed management to prevent the spread of noxious and invasive species during construction, and general wildlife avoidance and mitigation measures.

Erosion Control and Vegetation Management

- Disturbed soil will be scarified to assist with vegetation establishment.
- Existing trees that require removal will be chipped and spread over disturbed land in the Project Area to enhance soil stabilization and reduce erosion.
- Areas of temporary disturbance for construction will be re-seeded with native herbaceous species with a focus on pollinator suitable plants.
- Construction equipment will be washed prior to entering the Project work site, and monitoring for noxious weeds will occur after Project completion.
- Removal of large trees will be avoided where practicable (along wildlife corridor and outside building areas).
- Notification will be provided to the Arizona Department of Agriculture to allow salvage of protected native plants on private lands, and Horus will coordinate with interested parties on salvage of specific plant materials as practicable.

Habitat Enhancement/Wildlife Management

- Wildlife-friendly fencing will be established around the Project pursuant to AGFD published guidelines/approval.
- A wildlife corridor will be preserved at the Project Area where native vegetation will remain in its current condition.
- Though it will not be necessary to mass grade the Project Area, trees and bushes will be removed in development areas while herbaceous plants will remain. Herbaceous plants will be mowed and treated to maintain vegetative perennial cover that not only reduces fugitive dust and erosion, but minimizes potential impacts to wildlife.from the outer edge of panels between tracker rows, to reduce the potential for impacts to avian species.
- PV panels to be used for the Project will employ anti-reflectivity coating, integral to the panel to avoid glare/potential impacts to wildlife.
- Financial assurances in the amount of estimated decommissioning costs will be in place prior to construction, as required by the Solar Energy Power Plant ordinance regarding clean removal and disposal/recycling of any damaged panels and a decommissioning plan.
- Dust palliative will be applied along Central Highway adjoining the Project Area prior to and during construction to ensure dust is mitigated.
- Water consumption for the Project is limited to the construction phase and periodic cleaning of the panels. Water will be sourced from an onsite water well.
- Prior to construction, contractors/crews will be required to participate in a worker environmental awareness training program to educate them on stormwater best management practices, invasive weed management to prevent the spread of noxious and invasive species during construction, and general wildlife avoidance and mitigation measures.

Protection Species Covered under the Migratory Bird Treaty Act

- If construction were to occur between March 1 and August 31, a pre-construction nesting bird survey will be completed.
- Mowing shall not occur during the MBTA breeding season.
- The Project will follow Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) recommendations including adequate separation (spacing or covers) of energized equipment to prevent electrocutions from powerline conductors and substation equipment.

Water Use

The Dahlia Solar Project will not require water to generate power. During construction, the project may require water for dust control and earthwork compaction.

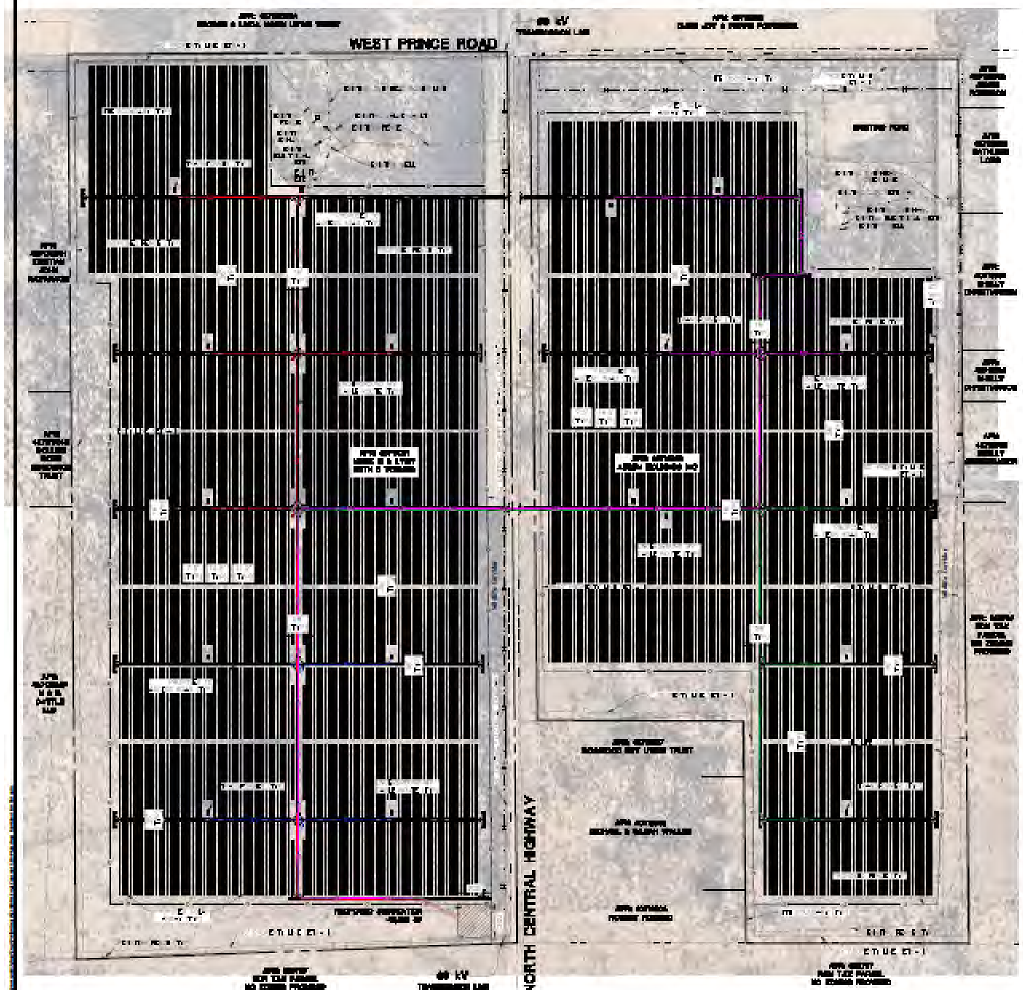
Water use during the 40-year operational life of the project is limited to panel cleaning. Similar projects use less than 200,000 gallons of water per year. That's equivalent to about 4 residential homes assuming 146 gallons/day per average AZ resident (ADWR 2023)*.

Water Resource Conservation Measures

The solar project site plan is designed to avoid natural drainages and flood areas to allow for continued onsite conveyance, natural recharge and wildlife movement.

Solar power generation is a long-term water saving solution. Panels do not require any water for cooling down, unlike other power plants.

*https://new.azwater.gov/conservation/public-resources



LEGEND

PROPOSED FENCE		MV FEEDER 100	
16' ACCESS ROAD		MV FEEDER 200	
SITE BOUNDARY		MV FEEDER 300	
		MV FEEDER 400	

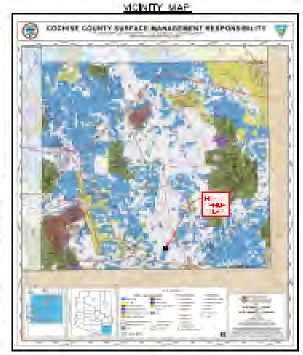
SCALE 1"=300'

GENERAL NOTES:

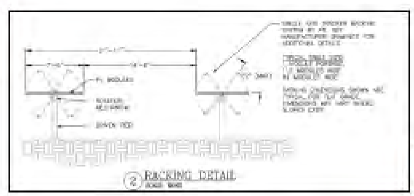
1. PROPERTY LINE BOUNDARIES WERE TAKEN FROM ALTA/NSPS LAND TITLE SURVEY OF HORUS DAHLIA SOLAR PREPARED BY [illegible] INC. DATED: 02/12/2024.
2. THIS PROJECT CONSISTS OF THE DESIGN AND INSTALLATION OF A 83 MWAC (NAMEPLATE), 75 MWAC (POI) SOLAR PHOTOVOLTAIC SYSTEM. BIFACIAL PV MODULES 1 IN PORTRAIT ARE TO BE MOUNTED ON SINGLE AXIS TRACKERS, WHICH FOLLOW FROM EAST TO WEST THROUGHOUT THE DAY. INTERCONNECTION TO BE COORDINATED WITH LOCAL UTILITY.
3. PER FEMA FLOOD MAP 04003C[illegible] DATED [illegible], SUBJECT PROPERTY IS NOT LOCATED IN A FLOOD HAZARD ZONE.
4. PROPOSED ACCESS POINTS AND ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH HIGHWAY AUTHORITY.
5. THE PROJECT WILL COMPLY WITH ALL ZONING AND COCHISE COUNTY REQUIREMENTS.
6. LOCATIONS OF ALL PROPOSED FACILITIES ARE SUBJECT TO CHANGE DUE TO PERMITTING CONSTRAINTS, SITE CONDITIONS, EQUIPMENT SPECIFICATIONS AND UTILITY COORDINATION.

PROJECT SITE DETAILS	
LATITUDE	[illegible]
LONGITUDE	-109.[illegible]
INTERCONNECTION VOLTAGE	34.5 kV AC
PROJECT AREA	[illegible] ACRES
PARCEL ID'S	[illegible]
OWNER	[illegible] CAPITAL
EXISTING ZONING	RU-4 (RURAL ZONING)
EXISTING USE	N/A
PROPOSED USE	SOLAR PV GENERATION
FENCED AREA	±[illegible] ACRES
FENCE LENGTH	±[illegible] LF
16' ACCESS ROAD	±[illegible] LF

VICINITY MAP



PROJECT SITE DETAILS	
AC SIZE- POI LIMIT (MWAC)	75.00
AC SIZE- NAMEPLATE (MWAC)	[illegible]
OVERBUILD %	[illegible]
DC SIZE (MWDC)	[illegible]
AC POI VOLTAGE (KV)	34.5
DC VOLTAGE (VDC)	1500
AVERAGE DC/AC RATIO (NAMEPLATE)	[illegible]
AVERAGE DC/AC RATIO (POI LIMIT)	[illegible]
INVERTER OUTPUT VOLTAGE (V)	[illegible]
(QTY) INVERTERS	[illegible] SUNGROW [illegible]
(QTY) MODULES- TYPE 1	[illegible] JINKO [illegible] BIFACIAL)
MODULES PER STRING	[illegible]
TOTAL (QTY) STRINGS	[illegible]
(QTY) 4-STR TABLE	[illegible]
(QTY) 3-STR TABLE	[illegible]
RACKING	ATI DURATRACK HZ (1P TRACKER)
AZIMUTH (DEG)	180
PITCH (FT/M)	[illegible]
MODULE ORIENTATION	PORTRAIT (1P)
RACKING ROTATION (DEG)	± [illegible]
GROUND COVER RATIO	[illegible]
NEC YEAR	2020
SITE DESIGN PARAMETERS	
ASHRAE WEATHER STATION	BISBEE DOUGLAS INTL AP, USA (WMO: [illegible])
MAX TEMPERATURE (°C)	[illegible]
MIN TEMPERATURE (°C)	-[illegible]



2 RACKING DETAIL

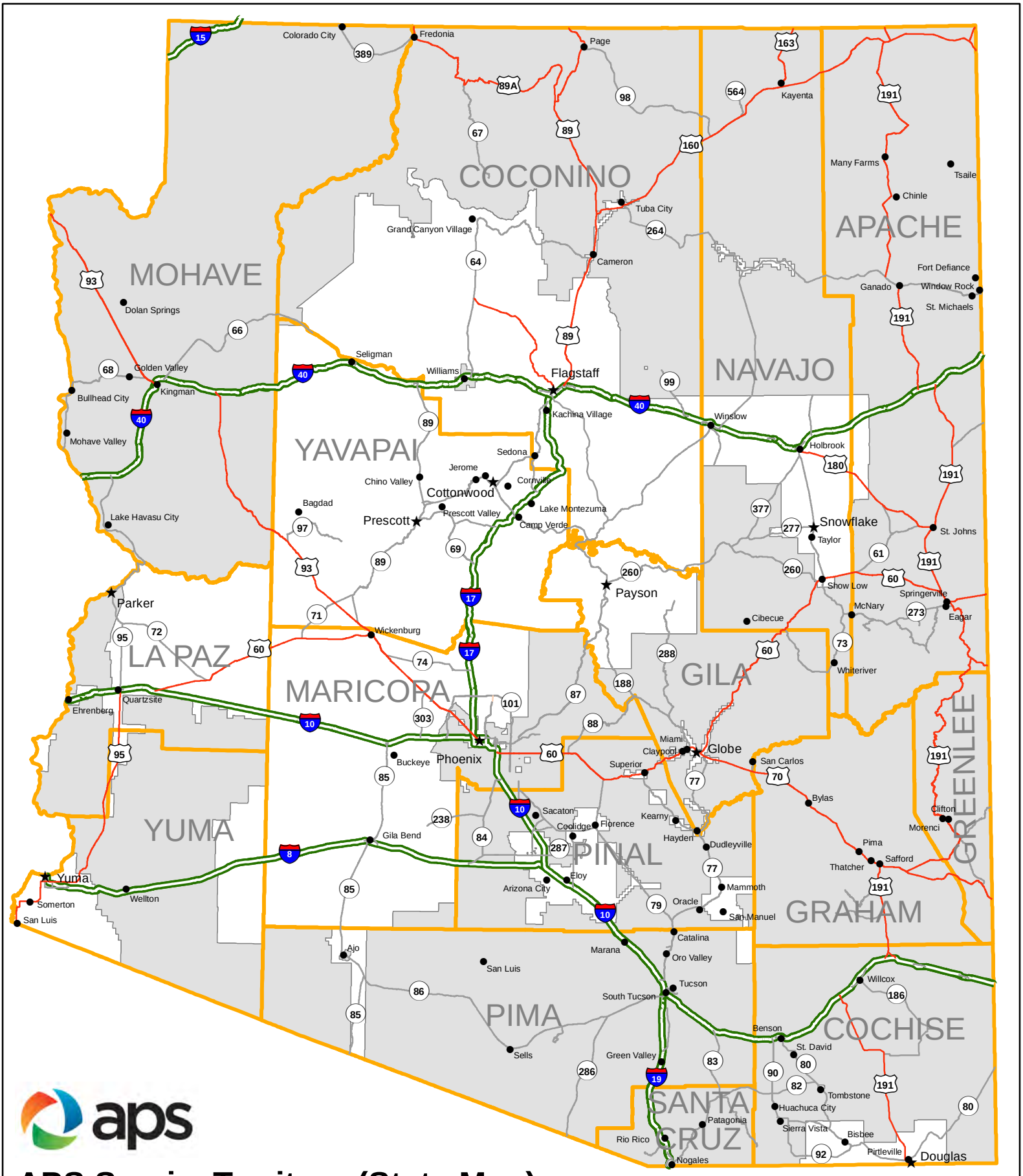
PUREPOWER ENGINEERING

Manhard CONSULTING

HORUS DAHLIA SOLAR
COCHISE COUNTY, ARIZONA
CONCEPT SITE PLAN

SHEET
EXH
HOR.00A201

NOT FOR CONSTRUCTION



APS ServiceTerritory (State Map)

As of 3/17/20

APS Service Territory

Non-APS Service Territory

N

Miles

0 12.5 25 50 75 100

APPENDIX 8
Photos from the Open House

DAHLIA SOLAR PROJECT OPEN HOUSE

MARCH 21, 2024, YMCA PLAZA ESMERELDA IN DOUGLAS, ARIZONA

Photo Description:

Sign-in table with project handout, blank comment forms and return comment form baskets.

Photo Description:

Sign in table, snack table and computer station (background) to review project area on aerial maps relative to landscape.

Photo Description:

Overview of poster board displays.

Photo Description:

Tables and chairs arranged to allow visitors a place to sit down. Comment forms and pens were available at each table.

Photo Description:

Project discussions with open house attendees.

Photo Description:

Project discussions with open house attendees.

Photo Description:

Project discussions with open house attendees.

Photo Description:

Project discussions with open house attendees.

APPENDIX 9
Project Website Printout

DAHLIA SOLAR PROJECT

Jobs

Revenues

Energy

Our Projects

Our projects will provide clean, abundant, and affordable energy to Arizona's grid, supporting economic growth and welfare in the area.

Project Features

• Projects MWac: 74MWac
• Enough to power 15,000 homes
• Equivalent to 32,000 cars taken off the road
• Metric tonnes of CO2 saved per year 160,000

Good For Cochise County

The solar farms' electricity will benefit rural communities and local industries through a power purchase agreement supporting rising local energy demands.

Project Benefits

• Increase in local tax revenue during the project life
• Job creation during construction
• Prioritizing the use of local businesses
• Improvement to local infrastructure
• Home-grown energy to secure Arizona's energy security

Land Stewardship Values

Horus is fully committed to responsible land management and stakeholder engagement.

Planned Environmental Enhancements

• Preservation of soils for future agriculture use
• Protection of endangered species

About Us

Dahlia Solar is a 74MWac solar farm site on c. 590 acres of land located near McNeal, Cochise County.

The ground-mounted solar generation facilities will enable to provide reliable, cost-effective, and clean energy to power the equivalent of 15,000 homes.

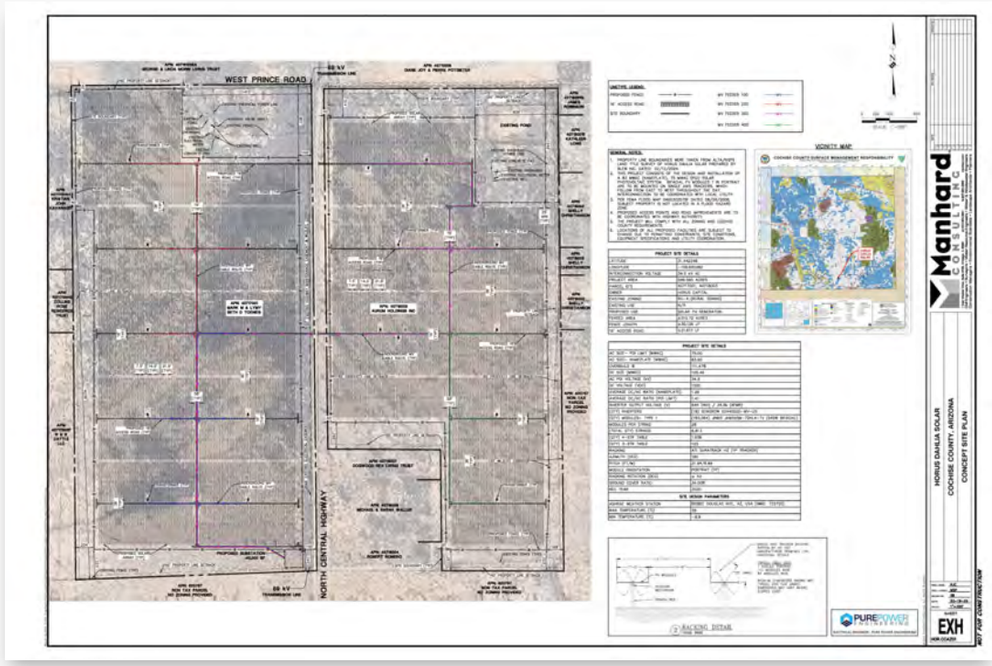
The co-located battery energy storage system will enable production to be delivered also at night time during peak hours.

The total investment in the facility is estimated to be $120 million. The project has completed field studies, environmental engineering and preliminary design is in progress.

Dahlia Solar is estimated executing an interconnection agreement with APS in 2026, with construction to begin that year and operations by mid-2028. The anticipated project life is 40-50 years.

Project Maps

click on the image to enlarge



click on the image to enlarge

click on the image to enlarge

click on the image to enlarge

click on the image to enlarge

click on the image to enlarge

Frequently Asked Questions

How much land is required for a solar farm?

A good rule of thumb is to allow five acres of land for every megawatt of solar power capacity. Horus may contract additional land to provide more flexibility for construction staging, site layout, and to account for non-developable areas on the landscape such as environmental features and to avoid existing infrastructure such as roads, wells, and residences.

Is the conversion of land to solar generation permanent?

No. At the end of the solar farm's life, it will be decommissioned or repowered. If decommissioned, equipment such as the solar modules and racking could be recycled and salvaged. Solar installations use steel posts that are driven or screwed into the ground, but do not use concrete pilings. This means that the landowner can resume its operations onsite after the life of the approximately 40-50 year lifespan of the solar project.

What is the amount of land that would be taken out of agricultural production with the proposed project?

Within the project area, there is currently no land that is being irrigated.
During the life of the project, the land would be given a rest and preserved for future agriculture use. While the installation of a solar facility changes the land use of the property, the soil fertility is enhanced by planting grasses and other low-growth species beneath the panels, in turn, managing weed growth and reducing soil erosion. At the time of decommissioning, the land will be restored to its previous condition or intended future use.

Why has this land been selected for the solar farm as opposed to brown fields where there is no detriment to the impact of the land?

Horus does encourage the development on brown field sites where it makes sense, but there are not enough of them next to good transmission systems to meet the growing demand for renewable energy in the country. This site was first selected based on the existing 69kV transmission line on site as well as the landowners' desire to lease land for solar energy generation, and to preserve their land for long-term future uses.

How much water a solar farm consumes as opposed to other sources of energy?

When compared to other typical land uses in the Project area, the project demonstrates a responsible use of Cochise County's limited water resources. Solar PV systems require minimal water use during operation for cleaning of the PV panels to maintain energy output. The exact cleaning schedule is a function of precipitation, dust, and other particulate settling on the panels. To minimize cleaning, the Project intends to treat neighbouring roads with GMCO CS products, a blend of liquid magnesium chloride and a complex sugar. The product is an environmentally friendly solution for gravel road stabilization and dust control. This will reduce water consumption related to cleaning during the operation period. In addition, the Project plans to establish large water collection tanks near the location of the substation. While fire is not a typical concern for PV systems, these water tanks may be utilized by the Cochise Fire District and will provide a key resource for protection against fires in the region, especially in times of drought.

What if the solar farm operator changes ownership or has insufficient assets to decommission or reclaim the solar farm?

If the solar farm changes ownership, the new operator will be subject to all of the obligations Horus is bound by. Horus will commit to the requirements set forth by Cochise County Code and that are part of the SU permit approval. The project owner will be responsible for removing the electrical equipment, poles, piles, foundations and conduits, as well as access roads, fencing, groundcover, landscaping, and

anything else installed as part of the project. As per the Decommissioning Plan established by the Cochise County Code, Horus must provide, a bond or letter of credit security in the amount sufficient to fund the decommissioning/reclamation costs. The property shall be restored to a condition reasonably similar to its condition prior to development of the major facility.

What is involved with day to day operations of the solar farm?

Solar farms are very passive in nature during the operations phase. The site will be visited periodically for operations and maintenance activities including regular operations site checks, vegetation maintenance, and environmental monitoring.

The site will be fenced for security and safety purposes and lighting will be placed at the main entrance gate and at key operational locations on the site. Security measures may also include CCTV, motion lights, anti-intrusion alarms, and dispatchable security guards.

What types of activities are expected during construction? How will dust be controlled?

Construction will include delivering equipment, site preparation, trenching the electrical collector system, and assembling and installing the solar modules and other electrical equipment. Horus will always try to minimize disruptions to a landowner's surrounding operations. Dust palliatives, suppressant, or binders and water tankers will be used to help control dust while the construction activities are occurring on the site. During the construction of the facility, best management practices will be utilized to limit fugitive dust from being airborne and traveling beyond the property lines. Dust control efforts will be monitored by the site foreman on a regular basis to ensure fugitive dust is adequately controlled.

Do solar farms contain Hazardous Materials?

The primary materials in solar modules are glass, aluminum, silicone, copper, and trace semiconducting metals, which are all inert and don't constitute hazardous materials or waste. There could be trace amounts of lead from soldering material, which is similar to televisions and cell phones. There is no risk of exposure of leakage and any amount contained in the modules is below the EPA limits.

How will vegetation and weeds be managed on the solar farm?

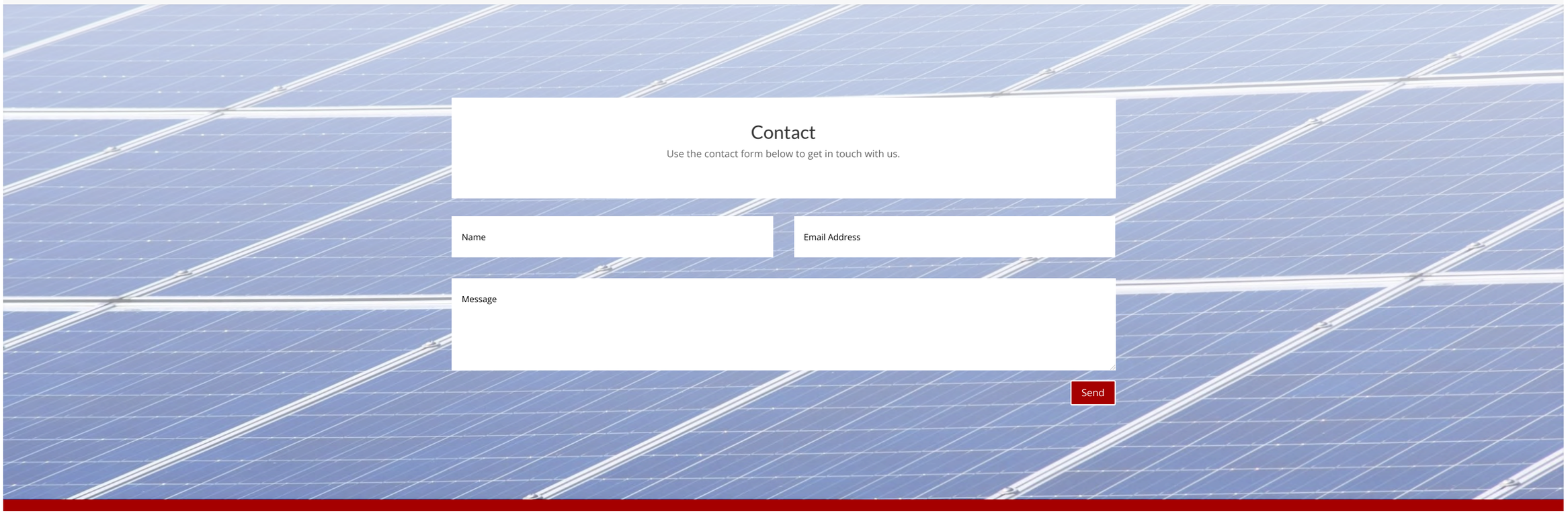
Periodic inspections of the project area during the beginning, middle, and end of the growing season will evaluate presence or absence, degree of invasion, and the response of previous treatments. Appropriate management actions will be implemented wherever noxious weed species are observed growing within the project area including identifying and managing noxious weeds, conducting pre-treatment and post-treatment evaluations, minimize the potential for transportation and importation of noxious weed species, educate field personnel in order to encourage compliance with weed management program goals and assist with identification and control efforts.

An Integrated Weed Management approach will be implemented for treatment of noxious weeds within the project area. An IWM approach enables selection of one or more weed management methods based on site specific environmental conditions and control needs. The following weed management methods will be considered for the project area: Chemical – application of appropriate herbicides by a licensed applicator (All herbicides will be applied in accordance with the manufacturer's label and in accordance with Arizona laws).

Community Outreach Meeting

Please feel free to consult the following documents for the upcoming community outreach meeting.

Please Click Here To Download The Files



Contact

Use the contact form below to get in touch with us.

Name

Email Address

Message

Send

APPENDIX 10
DoD Clearing House Email Letter

Diana Sandoval

From: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC <osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil>
Sent: Thursday, March 7, 2024 10:50 AM
To: Diana Sandoval
Cc: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC
Subject: RE: Horus Energy - Dahlia Solar | Cochise County Special Use Permit
Attachments: DOD_Siting_Clearinghouse_Informal_Request_Form_2023_1.pdf

Good afternoon Ms. Sandoval,

Thank you for contacting the Department of Defense (DoD) Military Aviation and Installation Assurance Siting Clearinghouse.

Please complete and return the attach review request form along with any additional associated documents (.kmz file) and we will begin processing your request promptly.

Very Respectfully,

The Clearinghouse
Military Aviation and Installation Assurance Siting Clearinghouse
Office of the Assistant Secretary of Defense (Energy, Installations and Environment)
Email: osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil

From: Diana Sandoval <DSandoval@westlandresources.com>
Sent: Thursday, March 7, 2024 12:39 PM
To: OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC <osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil>
Subject: Horus Energy - Dahlia Solar | Cochise County Special Use Permit

Good morning,

Horus Energy is proposing a solar generation facility in Cochise County, Arizona. WestLand is assisting Horus Energy with project permits. We understand Cochise County provides notification to the Department of Defense program email regarding proposed solar generation facilities. You have been identified as a project stakeholder and we would welcome any questions or comments on the Dalhia Solar Project.

Horus Energy plans to submit an obstruction evaluation/airport airspace analysis (OE/AAA) to the FAA for the Dahlia Solar Project. Additional information is available in the enclosed letter. A project open house is planned on March 21, 2024. Please see open house details on the enclosed letter.

Thank you,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C:** 520.991.4343

WestLand | Engineering & Environmental Services
4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | WestLandResources.com

APPENDIX 11
Corps Email Letter

From:	Tucker, Kathleen Ann CIV USARMY CESPL (USA)
To:	Diana Sandoval
Subject:	RE: [Non-DoD Source] Dahlia Solar AJD
Date:	Thursday, February 22, 2024 8:48:22 AM
Attachments:	2023westlandlogonew_69a14c78-fe28-4d13-ae17-7e53371f8159.png

---

While it is in my county please send all submittals to our general email, splregulatoryaz@usace.army.mil.
I have forwarded already.
Thanks

Sent with BlackBerry Work
(www.blackberry.com)

From: Diana Sandoval <DSandoval@westlandresources.com>
Date: Thursday, Feb 22, 2024 at 7:43 AM
To: Tucker, Kathleen Ann CIV USARMY CESPL (USA) <Kathleen.A.Tucker@usace.army.mil>
Cc: Diebolt, Sarah (Sallie) CIV USARMY CESPL (USA) <Sallie.Diebolt@usace.army.mil>, Brian Lindenlaub <blindenlaub@westlandresources.com>
Subject: [Non-DoD Source] Dahlia Solar AJD

Good morning,

Attached to this email, please find an Approved Jurisdictional Determination (AJD) request for your review. This site is being proposed for use as a utility scale solar generation site in Cochise County, Arizona.

Please let me know if you have any questions and confirm your receipt of this email.

I look forward hearing from you. Have a great day and perhaps a nice Rodeo weekend.

Respectfully,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

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4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | **WestLand**Resources.com

APPENDIX 12
County Emergency Management Email

From:	Diana Sandoval
To:	Duchon, Daniel
Cc:	Kimberly Otero
Subject:	RE: Dahlia Solar Project - Open House Invitation
Date:	Wednesday, March 13, 2024 9:28:30 AM
Attachments:	image001.png 2023westlandlogonew_69a14c78-fe28-4d13-ae17-7e53371f8159.png Dahlia Emergency Response Plan.pdf .docx

Hello Dan,

Thanks for the additional information. There is a good chance we will be busy getting ready for the open house in Douglas at that time so we are unable to attend the LEPC meeting next week, but do appreciate the offer.

If you are interested, we are happy to set up a separate call with you to discuss the project more. Attached is our draft emergency response plan that will be flushed out in the near future when a engineering/procurement/construction manager (EPCM) contractor is selected.

For future LEPC meetings, if we were going to focus on fire hazards, mitigation, and replacement procedures, it might make sense to wait until we have a EPCM selected to ensure we have specifics and processes for this site nailed down. We could provide a general project overview sooner however.

Thank you again,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

2023 WestLand Logo NEW.png

4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | **WestLand**Resources.com

From: Duchon, Daniel <DDuchon@cochise.az.gov>
Sent: Tuesday, March 12, 2024 10:26 AM
To: Diana Sandoval <DSandoval@westlandresources.com>
Subject: RE: Dahlia Solar Project - Open House Invitation

Hi Diana,
Yes, I noticed it is the same date. There will be an option to dial in virtually (MS Teams).

The Committee does focus on HAZMAT, however, any information is welcome. Yes, fire hazards, mitigation, or replacement procedures would be great. We use the Committee as an opportunity to

bring public safety partners together and discuss current happenings or new projects, even if not 100% HAZMAT related. Other solar projects or Batter storage systems have presented.

We meet quarterly, and you are welcome to attend the next in June.

Thanks,

Dan

Daniel S. Duchon
Emergency Management
Cochise Cochise
(520) 346-1044

From: Diana Sandoval <DSandoval@westlandresources.com>
Sent: Tuesday, March 12, 2024 6:57 AM
To: Duchon, Daniel <DDuchon@cochise.az.gov>
Subject: Re: Dahlia Solar Project - Open House Invitation

Hello Daniel,

Thanks for the invitation. That could potentially work but it's the same day as the open house so we want to be certain we could do both. I will check in with the larger team who will be traveling.

Would you be looking for a presentation of the project overall or specifically as it might relate to hazardous materials? I believe that's fairly limited as there's no battery or hazardous material storage on site. They could review any fire hazards/mitigation and explain the procedures for replacing panels and decommissioning, long-term?

If this month's meeting does not prove to be optimal, will there be another opportunity to present remotely on teams instead in the future?

Thank you,

Diana Sandoval

Sent from my iPhone

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

2023 WestLand Logo NEW.png

4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | **WestLand**Resources.com

On Mar 11, 2024, at 4:23 PM, Duchon, Daniel <DDuchon@cochise.az.gov> wrote:

Hi Diana,
Thank you for reaching out. Would you be interested in presenting to the Local Emergency Planning Committee? The LEPC is a non regulatory, committee which concentrates on HAZMAT and Tier II facilities, however, we often have presentations from new projects in the County which may be of interest to the public safety community.

The next meeting is Thursday, March 21, 2024, at 1:30pm, in Benson, AZ, or via MS Teams.

We would love to have someone present, let me know!

Dan

Daniel S. Duchon
Emergency Management
Cochise Cochise
(520) 346-1044

From: Diana Sandoval <DSandoval@westlandresources.com>
Sent: Thursday, March 7, 2024 11:25 AM
To: Duchon, Daniel <DDuchon@cochise.az.gov>
Subject: Dahlia Solar Project - Open House Invitation

CAUTION: EXTERNAL EMAIL*

Good morning Mr. Duchon,

Horus Energy is proposing a solar power generation facility in Cochise County, Arizona. WestLand has been retained to assist Horus Energy with local, state and federal permits. As the director of Cochise County Emergency Management, we have identified you as a potential project stakeholder and we would welcome any questions or comments on the Dalhia Solar Project. Horus Energy is having an open house on March 21, 2024 to invite neighbors and stakeholders to learn more about the project. The

attached open house letter provides basic project information and open house details.

Please let us know if you have any questions, or if you would like to arrange a separate call to discuss the project.

Thank you,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

—

<image001.png>

4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | **WestLand**Resources.com

This E-mail is from an **EXTERNAL** address. DO NOT click on links or open attachments unless you trust the sender and know the content is safe. If you suspect this message to be phishing, please report it using the Phish Alert Button at the top of the email, or forward to cochise.az.gov@missedspam.com or contact IT support at 520-432-8301.

APPENDIX 13
AGFD Email Letter

Diana Sandoval

Subject: FW: Dahlia Solar Project

From: Diana Sandoval <DSandoval@westlandresources.com>
Sent: Thursday, March 7, 2024 12:12 PM
To: Laura Paulson <lpaulson@azgfd.gov>
Cc: ejames@azgfd.gov; pep@azgfd.gov
Subject: RE: Dahlia Solar Project - Open House

Sounds great, thank you!

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

WestLand | Engineering & Environmental Services
4001 E Paradise Falls Dr, Tucson, AZ 85712
O: 520.206.9585 | **WestLand**Resources.com

From: Laura Paulson <lpaulson@azgfd.gov>
Sent: Thursday, March 7, 2024 11:42 AM
To: Diana Sandoval <DSandoval@westlandresources.com>
Cc: ejames@azgfd.gov; pep@azgfd.gov
Subject: Re: Dahlia Solar Project - Open House

Hi Diana,

Thank you for providing the flyer. I'll be up in Phoenix on the 21st and won't be able to stop in. I will pass it along to our local Wildlife Manager who may be able to stop by. In the meantime, the Department is working on its recommendations and comments and should have those to you in a couple of weeks.

Best,
Laura

On Thu, Mar 7, 2024 at 11:02 AM Diana Sandoval <DSandoval@westlandresources.com> wrote:

> Good morning Laura and Elizabeth (and Arizona Game and Fish Department project evaluation program email),
>
> As you know, Horus Energy is proposing a solar generation facility in Cochise County, Arizona. You have been identified as a project stakeholder and we would welcome any questions or comments on the Dalhia Solar Project. As previously discussed, Horus Energy is having an open house on March 21, 2024. The attached open house letter provides project information and open house details. Please feel free to attend and/or forward to other appropriate contacts at AGFD. We look forward to additional coordination with you.
>
> Thank you,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

From: Diana Sandoval <DSandoval@westlandresources.com>
Sent: Tuesday, February 27, 2024 11:14 AM
To: Laura Paulson <lpaulson@azgfd.gov>
Subject: RE: Dahlia Solar Project

Great, thank you.

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

From: Laura Paulson <lpaulson@azgfd.gov>
Sent: Tuesday, February 27, 2024 11:07 AM
To: Diana Sandoval <DSandoval@westlandresources.com>
Subject: Re: Dahlia Solar Project

Hi Diana,

The BE was attached! I didn't initially see it.

Thanks so much for the early engagement. We'll work on our recommendations.

Best,

Laura

On Mon, Feb 26, 2024 at 1:39 PM Diana Sandoval <DSandoval@westlandresources.com> wrote:

Hello Laura,

Will a KMZ work for you (attached)? To possibly save you the work of submitting the HDMS report, I am going to go ahead and transmit the Biological Evaluation prepared for the project.

Please don't feel like you need to review it before we speak but for your use, Appendix A provides the USFWS IPaC and Appendix B provides the AGFD HDMS.

I'll send you an invite for Tues, from 10:30-11 to review the project background, permitting requirements and the proponent's proposed environmental conservation measures for your consideration.

I look forward to speaking with you more. Thank you,

Diana Sandoval
SENIOR ENVIRONMENTAL PLANNER
D: 520.382.8934 **C**: 520.991.4343

From: Laura Paulson <lpaulson@azgfd.gov>
Sent: Monday, February 26, 2024 12:04 PM
To: Diana Sandoval <DSandoval@westlandresources.com>
Subject: Re: Dahlia Solar Project

Hi Diana,

Thank you for reaching out regarding this project. The best times to talk this week will be Tuesday between 9am-12pm and Thursday between 11am-1pm.

Do you have a shape file of the project location that you can share with me?

Thanks,

Laura

On Mon, Feb 26, 2024 at 8:55 AM Diana Sandoval <DSandoval@westlandresources.com> wrote:

> Hello Laura,
>
> Do you have availability for a brief call this week? I'd like to give you some background on an upcoming solar project in Cochise County.
>
> Thank you,
>
> **Diana Sandoval**
> **SENIOR ENVIRONMENTAL PLANNER**
> **D**: 520.382.8934 **C**: 520.991.4343
> —
> WestLand | Engineering & Environmental Services
> 4001 E Paradise Falls Dr, Tucson, AZ 85712
> **O**: 520.206.9585 | **WestLand**Resources.com

APPENDIX 14
Comment Forms Received
(Letter of Support)

HORUS ENERGY

Dahlia Solar Project - Comment Form

Noel Grantham
Name

N & B Cattle
Organization (if applicable)

6880 N. Indian Pl.
Address

McNeal, AZ 85617 morris.noel@yahoo.com
City State Zip code Email

Would you like a representative to follow up with you on your questions or comments? Yes ☐ No ☐

COMMENTS:

I think it's a wonderful idea water usage is minimal. Respect for the environment is clearly a priority to your company is greatly appreciated. Long term impact on our cattle is a concern but, we don't forsee any problems regarding breeding issues. Good Luck with everything.

Submit in person or by email to dsandoval@westlandresources.com

APPENDIX B
Representative Ground Photos

Photo 01.
Location: Public View 1
View: East
Notes: View along W Prince Road from near northwest corner of west parcel of project site (photo right).

Photo 02.
Location: Public View 2
View: West
Notes: View along W Prince Road from near northwest corner of west parcel of project site (photo left).

Photo 03.
Location: Public View 2
View: East
Notes: View along W Prince Road from near northwest corner of west parcel of project site (photo right).

Photo 04.
Location: Public View 2
View: South
Notes: View of west parcel of project site from W Prince Road near northwest corner of site.

Photo 05.
Location: Public View 3
View: West
Notes: View from intersection of N Central Highway and W Prince Road; west parcel of project site (photo left).

Photo 06.
Location: Public View 4
View: East
Notes: View along W Prince Road from intersection of N Central Highway and W Prince Road; east parcel of project site (photo right).

Photo 07.
Location: Public View 4
View: South
Notes: View along N Central Highway from intersection of N Central Highway and W Prince Road; east parcel of project site (photo left), west parcel (photo right).

Photo 08.
Location: Public View 5
View: South
Notes: View of east parcel of project site from W Prince Road near intersection of N Central Highway and W Prince Road.

Photo 9.
Location: Public View 6
View: West
Notes: View along W Prince Road from northeast corner of east parcel of project site (photo left).

Photo 10.
Location: Public View 11
View: West
Notes: View of southern portion of west parcel of project site from N Central Highway.

Photo 11.
Location: N Central Highway
View: North
Notes: View along N Central Highway near central portion of project site; western parcel (photo left), eastern parcel (photo right).

Photo 12.
Location: East Project Parcel
View: Southwest
Notes: Drainage ditch, east side of N Central Highway (photo background) near northwest corner of east parcel.

Photo 13.
Location: West Project Parcel
View: Northwest
Notes: Barren/disturbed land, northern portion of west parcel of project site.

Photo 14.
Location: West Project Parcel
View: West
Notes: Chihuahuan desert scrub vegetation, southwest portion of west parcel of project site.

Photo 15.
Location: West Project Parcel
View: North
Notes: Grass (big sacaton)-dominated area within Chihuahuan desert scrub vegetation, northcentral portion of west parcel of project site.

Photo 16.
Location: West Project Parcel
View: West
Notes: Drainage swale within Chihuahuan desert scrub vegetation, central portion of west parcel of project site (scale staff = 4 feet).

Photo 17.
Location: West Project Parcel
View: North
Notes: Stand of small trees (gum bumelia, soapberry) within Chihuahuan desert scrub vegetation, northeast portion of west parcel of project site.

Photo 18.
Location: East Project Parcel
View: Northeast
Notes: Abandoned livestock tank (photo center), northeast corner of east parcel of project site; soaptree yucca, Arizona salvage restricted native plant (photo center foreground).

Photo 19.
Location: East Project Parcel
View: Northeast
Notes: Grass (spider grass)-dominated floor of abandoned livestock tank, northeast corner of east parcel of site.

Photo 20.
Location: East Project Parcel
View: West
Notes: Sparse cover of Chihuahuan desert scrub vegetation, southeast portion of east parcel of project site.

Photo 21.
Location: East Project Parcel
View: North
Notes: Chihuahuan desert scrub vegetation, southcentral portion of east parcel of project site.

APPENDIX C
Approved Jurisdictional Determination Request

WestLand Engineering & Environmental Services

4001 E. Paradise Falls Drive
Tucson, AZ 85712
520-206-9585

February 21, 2024

Ms. Kathleen Tucker
U.S. Army Corps of Engineers
3636 North Central Avenue, Suite 900
Phoenix, AZ 85012

RE: DAHLIA SOLAR PROJECT – APPROVED JURISDICTIONAL DETERMINATION REQUEST
USACE FILE NO. SPL2024-TBD
WESTLAND PROJECT NO. 11427

Dear Ms. Tucker:

Horus Energy AZ 1 LLC, LLC (Horus Energy; the Applicant) retained WestLand Engineering & Environmental Services (WestLand), to evaluate and request an Approved Jurisdictional Determination (AJD) for the proposed Dahlia Solar Project located on approximately 591 acres, northwest of Douglas, Cochise County, Arizona (T23S, R26E, Sections 9 and 10; **Figure 1**).

WestLand has prepared the attached AJD request for U.S. Army Corps of Engineers (Corps) review and approval. The AJD request form is provided as **Attachment 1** of this submittal. An AJD form is provided as **Attachment 2**; although the AJD form is not reflective of the September 2023 conforming rule revision, it offers a reasonable summary of the Review Area features.

A ground survey to identify any potential waters of the United States (WOTUS) within the Review Area was completed on January 17, 2024, by WestLand. Analysis of the physical characteristics of surface water features within the Review Area was informed by the August 2008 delineation manual *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* and the July 2010 update to the title. Within the Review Area, there are no drainage features that possess the characteristics of an OHWM. Additional information is found in the attached submittal.

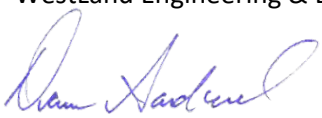
This letter transmits a request for review and issuance of an AJD for the Review Area. Included for your review are the following items:

- Request for Jurisdictional Determination (JD) (**Attachment 1**)
- AJD Form (Interim) 2023 Rule (**Attachment 2**) including:
  - Vicinity Map (**Figure 1**), Aerial Overview (**Figure 2**), Regional Overview (**Figure 3**), and Surface Water Features map with photo point locations (**Figure 4**), 200-foot scale OHWM Delineation Map and Corps Stamp (**Figure 5**).
- Directions to Review Area (**Attachment 3**)
- Representative Ground Photos (**Attachment 4**)

- Antecedent Precipitation Tool Graph (**Attachment 5**)
- Aerial Imagery (**Attachment 6**)
- NRCS Soils Map (**Attachment 7**)
- StreamStats Report (**Attachment 8**)

If you have any questions or require additional information, please do not hesitate to contact me at (520) 206-9585, or by email at dsandoval@westlandresources.com.

Respectfully,
WestLand Engineering & Environmental Services



Diana Sandoval
Sr. Project Manager

DLS:kd
Attachments (as outlined in text)

ATTACHMENT 1
Agent Designation Letter and Authorization for Federal Access

Print Form | Save As

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that are or that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.

System of Record Notice (SORN): The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website:

http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. To (*District Name*): Los Angeles

2. I am requesting a JD on property located at (*Street Address*): 4283 & 4355 W. Prince Road

City/Township/Parish: Double Adobe/McNeal County: Cochise State: Arizona

Acreage of Parcel/Review Area for JD: 591 acres

Section: 09 and 10 Township: 23 Range: 26E

Latitude (*decimal degrees*): 31.444000 ° Longitude (*decimal degrees*): -109.69827 °

(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. ☐ I currently own this property. ☐ I plan to purchase this property.

☑ I am an agent/consultant acting on behalf of the requester.

☐ Other (*please explain*):

Print Form | Save As

5. Reason for request: (*check as many as applicable*)

- [ ] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- [x] I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- [ ] I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- [ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- [ ] A Corps JD is required in order to obtain my local/state authorization.
- [ ] I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- [ ] I believe that the site may be comprised entirely of dry land.
- [ ] Other:

6. Type of determination being requested:

- [x] I am requesting an approved JD.
- [ ] I am requesting a preliminary JD.
- [ ] I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- [ ] I am unclear as to which JD I would like to request and require additional information to inform my decision.

7. Typed or Printed Name: _____ Daytime Phone No.: _____

Company Name: WestLand Engineering and Environmental Services Email Address: _____

Address: 4001 E Paradise Falls Drive, Tucson, AZ 85712

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

	Date:

ATTACHMENT 2
AJD Form

US ARMY CORPS OF ENGINEERS (USACE)
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
2023 RULE

OMB Control Number: 0710-0024
Expiration Date: 09/30/2023

AGENCY DISCLOSURE NOTICE

The public reporting burden for this collection of information, 0710-0024, is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): DATE
ORM Project Name: Enter ORM Project Name
ORM Identification Number: Enter ORM ID Number
☐ Other sites (e.g., offsite mitigation sites, disposal sites or other review areas, etc.) are associated with this action and are recorded on a different jurisdictional determination (JD) form(s).
Associated JD Names and Numbers: N/A or List Associated AJDs or PJDs
Review Area Location: State/Territory: Arizona City: Double Adobe/McNeal, Arizona
County/Parish/Borough: Cochise County
Center Coordinates of Review Area: Latitude: 31.444°N, Longitude: -109.698°W
Limits of review area: See Attached Figures 1 and 2

II. SUMMARY[2]

Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding tables in Section III., summarize data sources in Section IV., and attach completed Appendices A and/or B when specified.
☐ The review area is comprised entirely of dry land (i.e., there are no waters such as streams, rivers, wetlands, lakes, ponds, tidal waters, ditches, and the like in the entire review area). Rationale: Provide Rationale for Dry Land Determination
☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete the table in Section III.A.).
☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section III.B. and complete and attach appendices as appropriate).
☒ Potentially jurisdictional waters and/or features were assessed within the review area and determined to be non-jurisdictional (complete appropriate tables in Section III.C. and complete and attach appendices as appropriate).

[1] The final rule "Revised Definition of 'Waters of the United States'" (2023 Rule) was published in the *Federal Register* on 18 January 2023 and the effective date is 20 March 2023. See https://www.federalregister.gov/documents/2023/01/18/2022-28595/revised-definition-of-waters-of-the-united-states.
[2] Map(s)/figure(s) or descriptions of the review area and any jurisdictional waters are attached to the AJD provided to the requestor.

III. FINDINGS IN THE REVIEW AREA

A. Jurisdictional under the Rivers and Harbors Act of 1899[3] (Section 10)[4]

Section 10 Waters			
Section 10 water name	Section 10 size in review area		Type of Section 10 water
N/A	N/A	N/A	N/A.
Rationale for determination: No Section 10 waters present. Surface water features in the Review Area consist primarily of ephemeral swales that lack both an OHWM and a surface connection to down-gradient surface waters. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters. See Section IV. D.			

B. Jurisdictional under the Clean Water Act

Paragraph (a)(1) waters:[5] Waters which are: (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide (Traditional Navigable Waters); (ii) The territorial seas; or (iii) Interstate waters, including interstate wetlands			
(a)(1) water name	(a)(1) size in review area		Type of paragraph (a)(1) water
N/A	N/A	Acre(s)	N/A
Rationale for determination: No Paragraph (a)(1) waters present. Surface water features in the Review Area consist primarily of ephemeral swales that lack both an OHWM and a surface connection to down-gradient surface waters. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters. See Section IV. D.			

Paragraph (a)(2) waters: Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5)			
(a)(2) water name	(a)(2) size in review area		Type of paragraph (a)(2) water
N/A	N/A	N/A	N/A.

[3] If the navigable water of the United States is not subject to the ebb and flow of the tide and not included on the district's list of Rivers and Harbors Act (RHA) Section 10 navigable waters of the United States list do NOT use this form to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedure outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the Rivers and Harbors Act.

[4] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this AJD form, jurisdiction under RHA will be referred to as Section 10.

[5] A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of RHA is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

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APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
2023 RULE

Paragraph (a)(2) waters: Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5)		
(a)(2) water name	(a)(2) size in review area	Type of paragraph (a)(2) water
Rationale for determination: No Paragraph (a)(2) waters present. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters, and therefore is not an impoundment of waters of the U.S. See Section IV. D.		

Paragraph (a)(3) waters: Tributaries of waters identified in paragraph (a)(1) or (2): (i) That are relatively permanent, standing or continuously flowing bodies of water; or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)			
(a)(3) water name	(a)(3) size in review area		Type of paragraph (a)(3) water
N/A	N/A	N/A	N/A.
Rationale for determination: No Paragraph (a)(3) waters present. Surface water features in the Review Area consist primarily of ephemeral swales that lack both an OHWM and a surface connection to down-gradient surface waters. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters. See Section IV. D.			

Paragraph (a)(4) waters: Wetlands adjacent to the following waters: (i) Waters identified in paragraph (a)(1); or (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) and with a continuous surface connection to those waters; or (iii) Waters identified in paragraph (a)(2) or (3) when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1)			
(a)(4) water name	(a)(4) size in review area		Adjacency criteria
N/A	N/A	N/A	N/A
Type of paragraph (a)(4) water	N/A		
Rationale for determination: No Paragraph (a)(4) waters present; no wetlands were identified. Surface water features in the Review Area consist primarily of ephemeral swales that lack both an OHWM and a surface connection to down-gradient surface waters. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters, was constructed in upland, and lacks wetland indicators. See Section IV. D.			

US ARMY CORPS OF ENGINEERS (USACE)
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
2023 RULE

Paragraph (a)(5) waters: Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4): (i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3)(i); or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1).[6]			
(a)(5) water name	(a)(5) size in review area		Type of paragraph (a)(5) water
N/A	N/A.	N/A	N/A
Rationale for determination: No Paragraph (a)(5) waters present. Surface water features in the Review Area consist primarily of ephemeral swales that lack both an OHWM and a surface connection to down-gradient surface waters. An abandoned, dry livestock tank in the Review Area lacks connectivity to surface waters. See Section IV. D.			

[6] In implementing the significant nexus standard, the agencies generally intend to analyze waters under paragraph (a)(5) individually to determine if they significantly affect the chemical, physical, or biological integrity of a paragraph (a)(1) water.

C. Waters or features that are not jurisdictional under the Clean Water Act

Waters analyzed under paragraph (a)(3)(ii), (a)(4)(iii), or (a)(5)(ii) and determined non-jurisdictional: Tributaries of waters identified in paragraph (a)(1) or (2); and/or wetlands adjacent to waters identified in paragraph (a)(2) or (3); and/or intrastate lakes and ponds, streams, or wetlands not identified as (a)(1) through (4) waters; that either alone or in combination with similarly situated waters in the region, do not significantly affect the chemical, physical, or biological integrity of waters identified in paragraph (a)(1).

Water name	Water size in review area	Type of water for which significant nexus was not met:	
1	0.40358	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
2	0.073892	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
3	0.025503	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
4	0.288559	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
5	0.179591	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
6	0.08874	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.
Abandoned Livestock Tank	5.760856	Acre(s)	(b)(8) Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water that meets (c)(6).
Rationale for determination: See Section IV. D	1.056185 (total for features 1 through 6 only)	Acre(s)	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.

(b)(1) – (b)(8) Excluded Features[7]

Excluded feature name	Excluded feature size in review area	Exclusion[8]
Rationale for determination: N/A		

IV. SUPPORTING INFORMATION

A. Paragraph (a)(1) water that is outside the review area:

a. Provide the name of the paragraph (a)(1) water: N/A

[7] Transient features on the landscape that are difficult to document due to their non-permanent nature, such as rills and gullies, may not be specifically identified on the AJD form unless a requestor specifically asks a USACE district to do so. USACE districts may, in case-by-case instances, elect to document any such feature on a case-by-case basis, such as when the feature is relevant to analysis of the jurisdictional status of another water.

[8] Note the full text of the exclusions for (b)(1)-(6) and (b)(8) are included in the dropdown list, while the text for the (b)(7) exclusion is truncated due to space limitations. The full text of the (b)(7) exclusion is as follows: (b)(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States

b. Type of paragraph (a)(1) water: N/A.
c. Provide the rationale for jurisdiction of the paragraph (a)(1) water: No waters in the Analyis Area or vicinity are included on the ACOE Los Angeles District list of Naviagble or Traditionally Navigable Waters.

B. Significant nexus analyses

☐ Appendix A is attached and includes the significant nexus analysis for any waters in the review area that were evaluated under paragraph (a)(3)(ii) and/or paragraph (a)(4)(iii).
☐ Appendix B is attached and includes the significant nexus analyses for any waters in the review area that were evaluated under paragraph (a)(5)(ii).
☒ There are no waters in the review area that require evaluation under the significant nexus standard. Therefore, neither Appendix A nor Appendix B are included with this form

C. Data, models, and other relevant methods Select/enter all resources that were used to support this determination and include data/maps and/or references/citations in the administrative record, as appropriate.

☒ Aquatic resources delineation submitted by, or on behalf of, the requestor: WestLand Engineering and Environmental Services, XXXX, 2024
The aquatic resources delineation submitted by or on behalf of the requestor is sufficient for purposes of this AJD Yes
Rationale: N/A
☐ Aquatic resources delineation prepared by the USACE: N/A
☐ Wetland field data sheets prepared by the USACE: N/A
☐ OHWM data sheets prepared by the USACE: N/A
☐ USACE site visit: Date(s) of site visit(s): N/A, N/A
☐ Previous Jurisdictional Determinations (AJDs or PJDs) addressing the same (or portions of the same) review area: N/A
☒ Photographs: Ground photographs, 01-17-2024
☒ Aerial Imagery: Maxar 2023; Google Earth 2021, 2024
☐ LiDAR: N/A
☒ USDA NRCS Soil Survey: Web Soil Survey, January 2024
☒ USFWS NWI maps: January 2024, Approved AJD, Figure 3,
☒ USGS topographic maps: National Map Viewer, January 2024
☒ USGS NHD data/maps: January 2024, Approved AJD, Figure 3,
☐ USGS Dynamic Surface Water Extent: N/A N/A
☐ Section 10 navigability resource used: N/A

Other data sources or models used to aid in this determination:

Data source or model (Select)	Name, date, and other relevant information
USGS Stream stats	January 30, 2024
USEPA Sources	N/A
USDA Sources[9]	NRCS Web Soil Survey
NOAA Sources	N/A

[9] Including Certified Wetland Determination from the NRCS.

Antecedent Precipitation Tool (APT)	August 01, 2021; January 17, 2024
State/Local/Tribal Sources	ADWR – AZ55 Well Data
Other Sources	USGS NHD; USFWS NWI

D. **Additional comments to support AJD:** The Analysis Area consists of two parcels (western parcel, 407-17-001, 322 acres; eastern parcel, 407-18-003, 269 acres) located near the southern end of Sulpher Springs Valley, a broad valley situated between the Dragoon and Mule Mountains to the west and the Pedregosa, Swisshelm, and Chiricahua Mountains to the east (Figure 1 and Figure 2). The Anaysis Area is located approximately 6 miles east of the Mule Mountains and one mile south of the Town of Double Adobe at the corner of W Prince Road and N Central Highway, with an unpaved section of N Central Highway separating the two parcels. Whitewater Draw, which is not listed as a Navigable or Traditionally Navigable Water (TNW), is approximately 1.2 miles northeast of the Anaysis Area. Elevations in the Analysis Area are between approximately 4,015 and 4,045 feet (ft) above mean sea level (amsl). Photos of the vegetation community and surface drainage features within the Analysis Area are provided in Attachment 4 of the Approved JD request.

The Analysis Area biotic community is mapped as semidesert grassland (Brown and Lowe 1980), but based on field analysis, is more accurately characterized as Chihuahuan desert scrub. Domnant subcanopy shrubs are honey mesquite (Prosopis glandulosa), whitethorn acacia (Vachellia constricta), and tarbush (Flourensia cernua). Shrub cover ranges from sparse with scattered low hummocks supporting individual mesquite and acacia shrubs to a relatively dense, closed canopy scrub. Canopy trees are generally lacking, although the tree-form of whitethorn acacia is scattered throughout. Additionally, a stand of small trees located in the northeast corner of the western parcel is dominated by gum bumelia (Sideroxylon lanuginosum), netleaf hackberry (Celtis reticulata), and the tree-form of western soapberry (Sapindus saponaria). While netleaf hackberry is typically found along streams and in canyons, there are no surface drainage features in this portion of the Analysis Area. Although understory cover is generally sparse to lacking, small, dense stands of sacaton (Sporobolis wrightii) are patchily distributed across the Analysis Area. Other understory species include vine mesquite (Hopia obtusa), spider grass (Aristida ternipes), silver nightshade (Solanum elaeaganifolium), and broom snakeweed (Gutierrezia sarothrae). A dry, abandoned livestock tank at the northeast corner of the eastern parcel supports a dense cover of grasses dominated by spider grass, with lesser amounts of vine mesquite and Bermuda grass (Cynodon dactylon). Several small patches of Johnson grass (Sorghum halapense) and cocklebur (Xanthium strumarium) are also present on the floor of the tank.

Surface drainage features in the Analysis Area are limited to five swale-like features in the central and southern portions of the western parcel, as well a single feature on the eastern parcel. None of the Anaysis Area drainage features are included in the USGS National Hydrographic Dataset (NHD) or USFWS National Wetland Inventory (NWI) (Approved JD, Figure 3 and Figure 4) and, based on field analysis, lack an observable OHWM (Approved JD, Attachment 4). Furthermore, none of the Analysis Area surface dranage features currently have a surface connection to down-gradient waters. StreamStats identified four drainage basins totalling approximately 3.6 square miles (sq mi) that potentially contribute surface flow to the Analysis Area (Approved JD, Attachment 8). Of this total, two of the basins totalling approximately 2.79 sq mi potentially contribute flow to the portion of the Analysis Area where the swales are located. All of the drainage features on the western parcel terminate on the parcel, and none extend to N Central Highway. No indication of concentrated surface flow across the roadway was observed and no road culverts are present. Several approximately 100-foot-long drainage ditches along the east side of the roadway facilitate surface water drainage off of the road onto the eastern parcel of the Analysis Area. However, none of these ditches are associated with natural surface drainage features. Surface drainage connectivity on the eastern parcel to offsite areas is lacking due to W Prince Road to the north and rural residential development to the east. Construction of roadways

and agricultural land use practices in the Anaysis Area and vicinity, primarily livestock production, have likely contributed to altering surface flow condition from historic conditions.

The abandoned tank on the eastern parcel was not created by impoundment of surface waters as no surface drainage features are located in proximity to this feature. Additionally, the tank was determined to be a non-wetland feature due to: construction in an upland area with soils classified by the NRCS as non-hydric in Cochise County (Forrest Clay Loam, 1 to 3 percent slopes); a predominance of non-hydrophytic species comprising the vegetative cover on the tank floor; and the lack of persistent surface ponding except possibly during exceptionally wet periods as determined during the site assessment and review of historic aerial imagery (Approved JD, Attachment 4 and Attachment 6).

A typical year assessment was completed by WestLand using the APT (version 2.0.0) for January 17, 2023, the WestLand field assessment date, during a relatively wet month preceded by a drier than normal period. The APT tool (Approved JD, Attachment 5) used data from a single site located within the central portion of the western parcel of the Analysis Area. Regional data included with the APT output graph indicate that conditions in the Analysis Area for the selected date were wetter than normal for a typical year. Despite the wetter than normal conditions, aerial imagery from the same time frame do not show any flow in the drainage features within the Analysis Area (Approved JD, Attachment 6) and no surface flow or ponding was observed during WestLand's site visit. The Palmer Drought Severity Index (PDSI) identified normal drought conditions for the 90-day period preceding the field assessment. A second assessment for August 2021, an exceptonally wet period, was also completed. This assessment indicated a wetter than normal period overall for this date with preceding months near normal. The PDSI identified a mild drought for this period. Aerial imagery from this assessment date does not show surface flow within the Anaysis Area drainage features, although there does appear to be a flush of herbaceous growth and shrub leaf production suggesting a period of significant rainfall prior to imagery capture. Aerial imagery from this date did indicate a small area of potential surface ponding in the abandoned cattle tank on the eastern parcel. Whitewater Draw located approximately 1.2 miles down-gradient of the Analysis Area also lacked surface flow on this date. Combined information from APT analysis, aerial imagery, and the field assessment suggest that surface flows in the Analysis Area are short duration, low volume flows that percolate rapidly into the well-drained soils onsite.

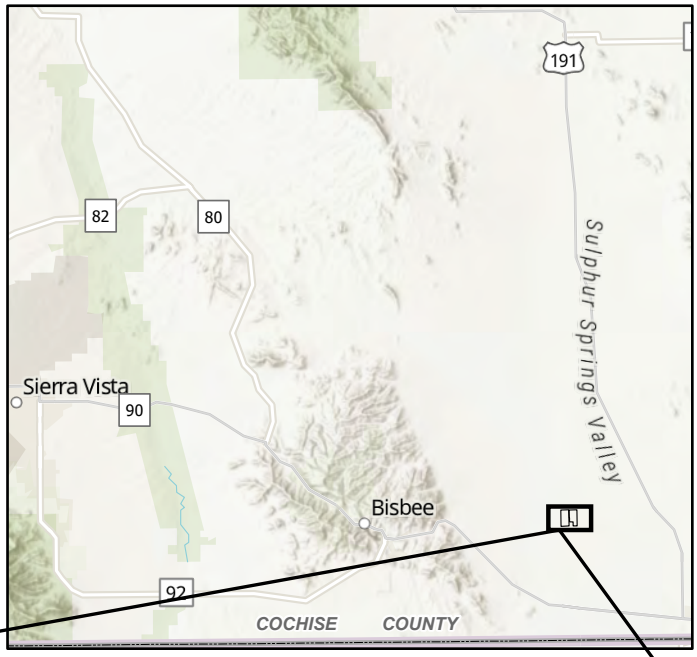
Three wells within the AZ Wells 55 Registry were identified as occurring within the Analysis Area: one on the western parcel (Well ID 641198) and two on the eastern parcel (Well IDs 611217, 800262) (Approved AJD, Figure 3). None of these wells are located immediately adjacent to or within surface drainage features in the Anaysis Area.The recorded depth to groundwater in these wells at the time of installation ranged from 57 ft to 75 ft below ground surface. Several wells located on properties immediately adjacent to the Analysis Area (Well IDs 236527, 601300, 801584) report groundwater depths in the same range as onsite wells. Another three wells are located upgradient and in the vicinity of the drainage basin of the Anaysis Area as estimated by Streamstats. Depth to groundwater in these wells (Well IDs 562761, 611337, 630530, 912044) ranged from 59 ft to 72 ft below ground surface. The nearest well along Whitewater Draw to the Analysis Area (Well ID 538258) reports a groundwater depth of 39 ft below ground surface. Although depth to groundwater in all of these wells is relatively shallow, there is a low potential for groundwater within the Analysis Area and adjacent lands to contribute to surface flows to on- and offsite drainage features under normal circumstances.

Because all of the drainage features in the Analysis Area are ephemeral and lack an OHWM and a surface connection to down-gradient waters, these features would not qualify as 'waters of the U.S.' (WOTUS) and therefore are exempt from federal Clean Water Act jurisdiction under the 2023 Navigable Waters Protection Rule (NWPR). The abandoned livestock tank also lacks a connection to surface water features, was constructed in an upland area with non-hydric soils, and lacks positive indicators of a jurisdictional wetland; therefore, it would also be exempt from federal jurisdiction under the NWPR.

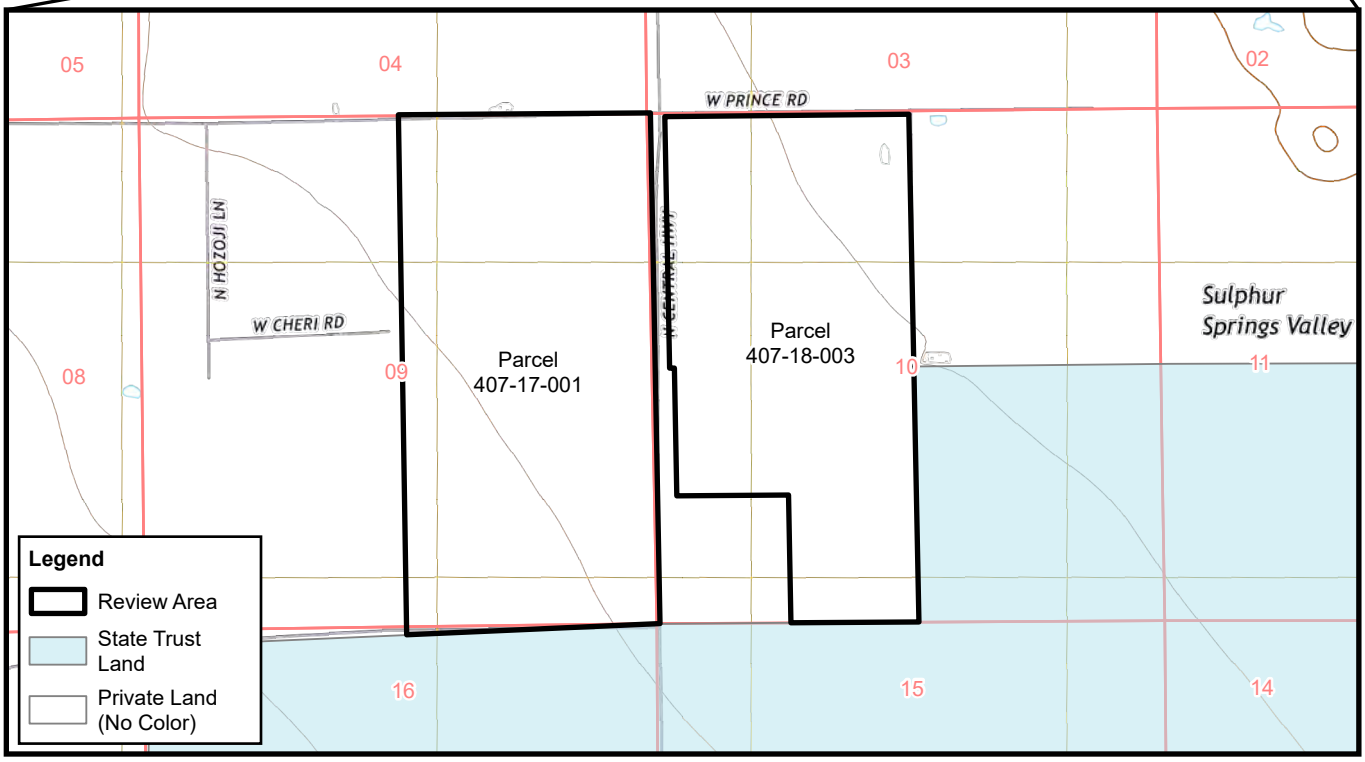
FIGURES

ARIZONA

PROJECT VICINITY



Approximate Scale 1 inch equals 12 miles



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Double Adobe USGS 7.5' Quadrangle (2021)
Projection: NAD 1983 UTM Zone 12N
Surface Management: Cochise County
Image Source: ArcGIS Online, World Topographic Map

HORUS ENERGY

Dahlia Solar

Parcels 407-17-001 and 407-18-003

Approved Jurisdictional Determination

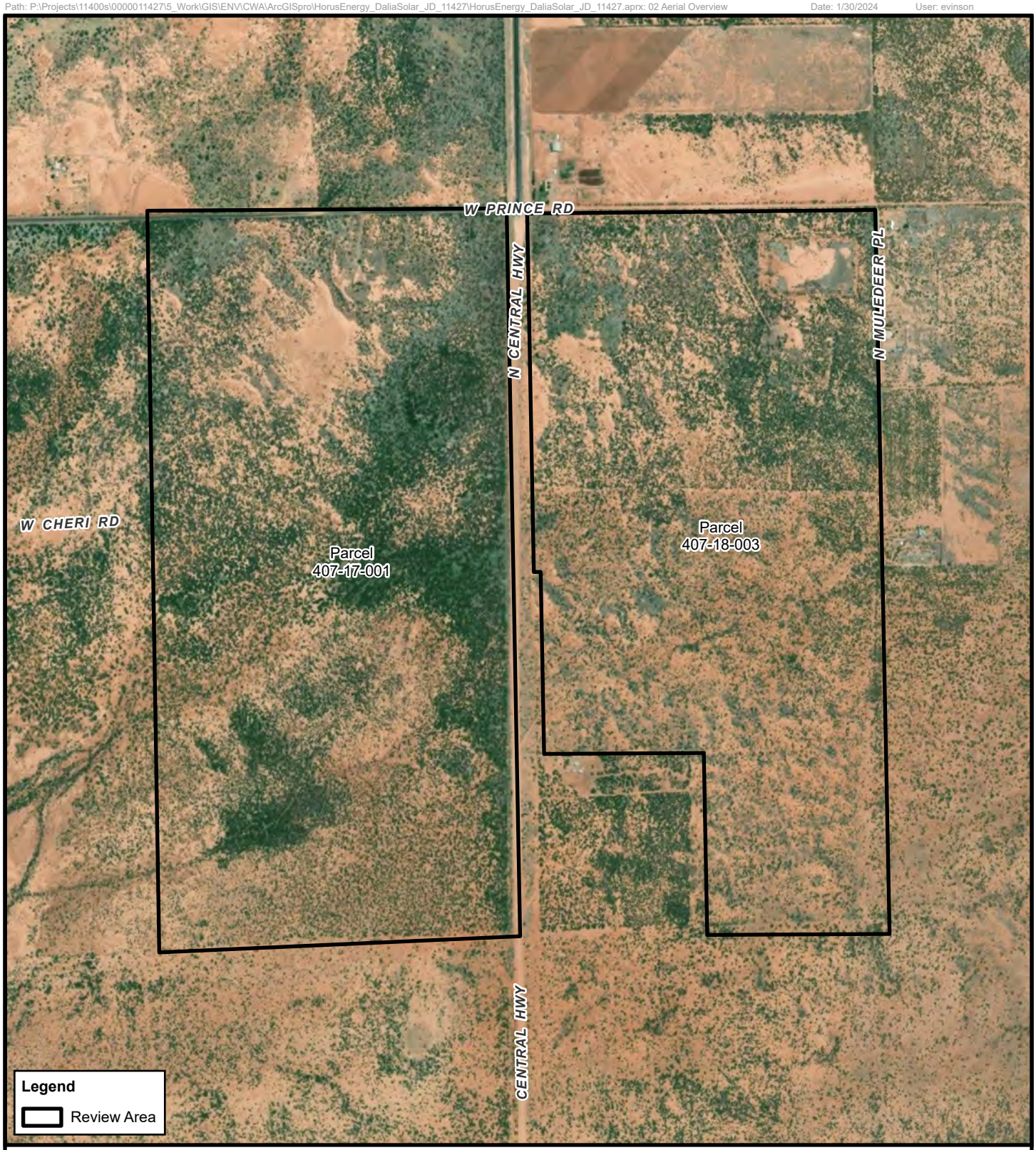
VICINITY MAP
Figure 1

WestLand Engineering & Environmental Services

N

0 1,000 2,000 Feet

0 300 600 Meters



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Projection: NAD 1983 UTM Zone 12N
Image Source: Maxar 03/19/2022

HORUS ENERGY

Dahlia Solar

Parcels 407-17-001 and 407-18-003

Approved Jurisdictional Determination

AERIAL OVERVIEW

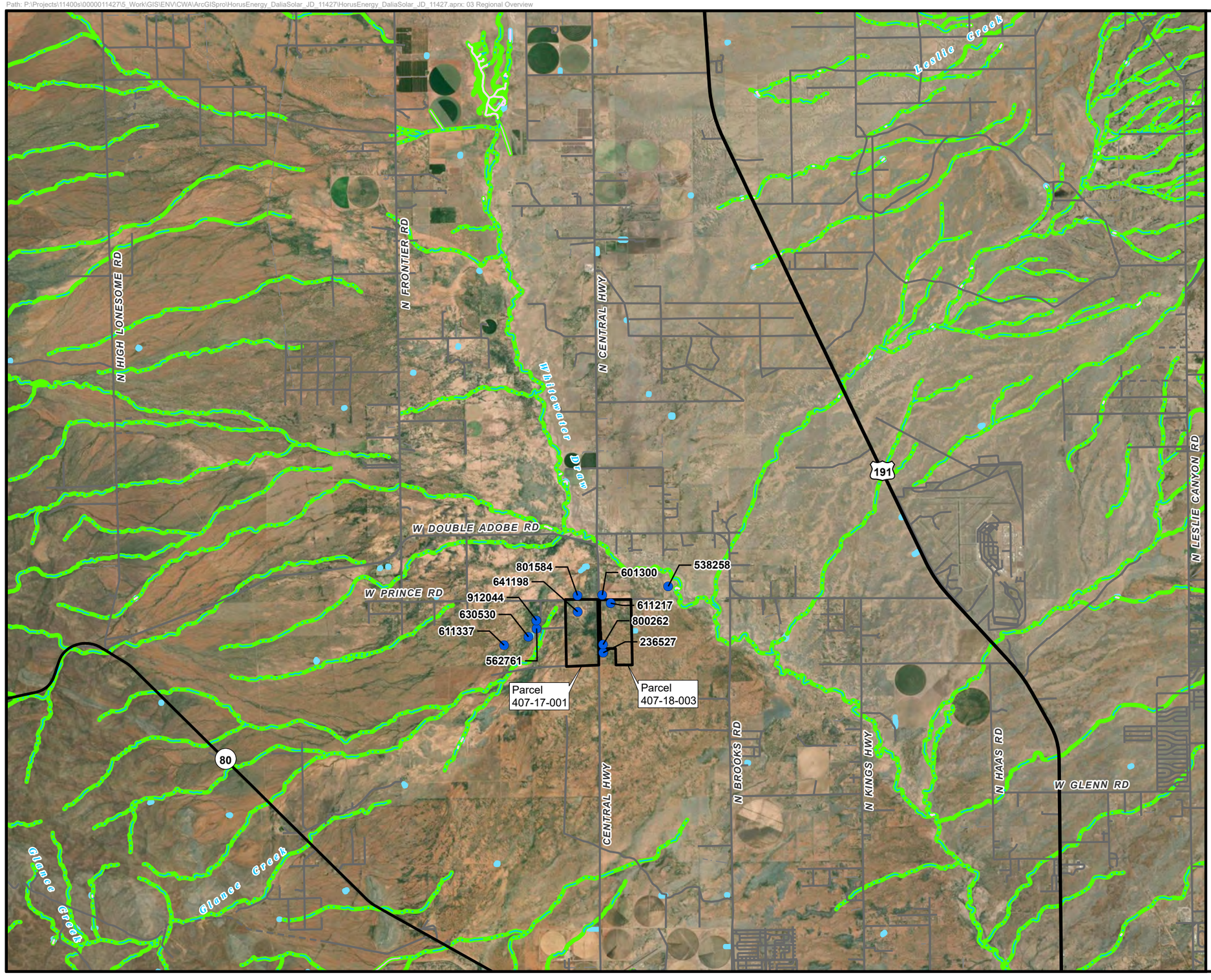
Figure 2

WestLand Engineering & Environmental Services

N

0 500 1,000 Feet

0 150 300 Meters



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Projection: NAD 1983 UTM Zone 12N
Data Source: Arizona Game and Fish Department,
Arizona Department of Water Resources,
National Hydrography Dataset Arizona,
and USFWS National Wetland Inventory
Image Source: Maxar 06/02/2023-06/07/2023

Legend

- Well
- Canal/Ditch
- Stream/River
- Artificial Path

Wetland Type

- Freshwater Pond
- Riverine Review
- Review Area

N

0 0.5 1 Miles

0 1 2 Kilometers

WestLand Engineering & Environmental Services

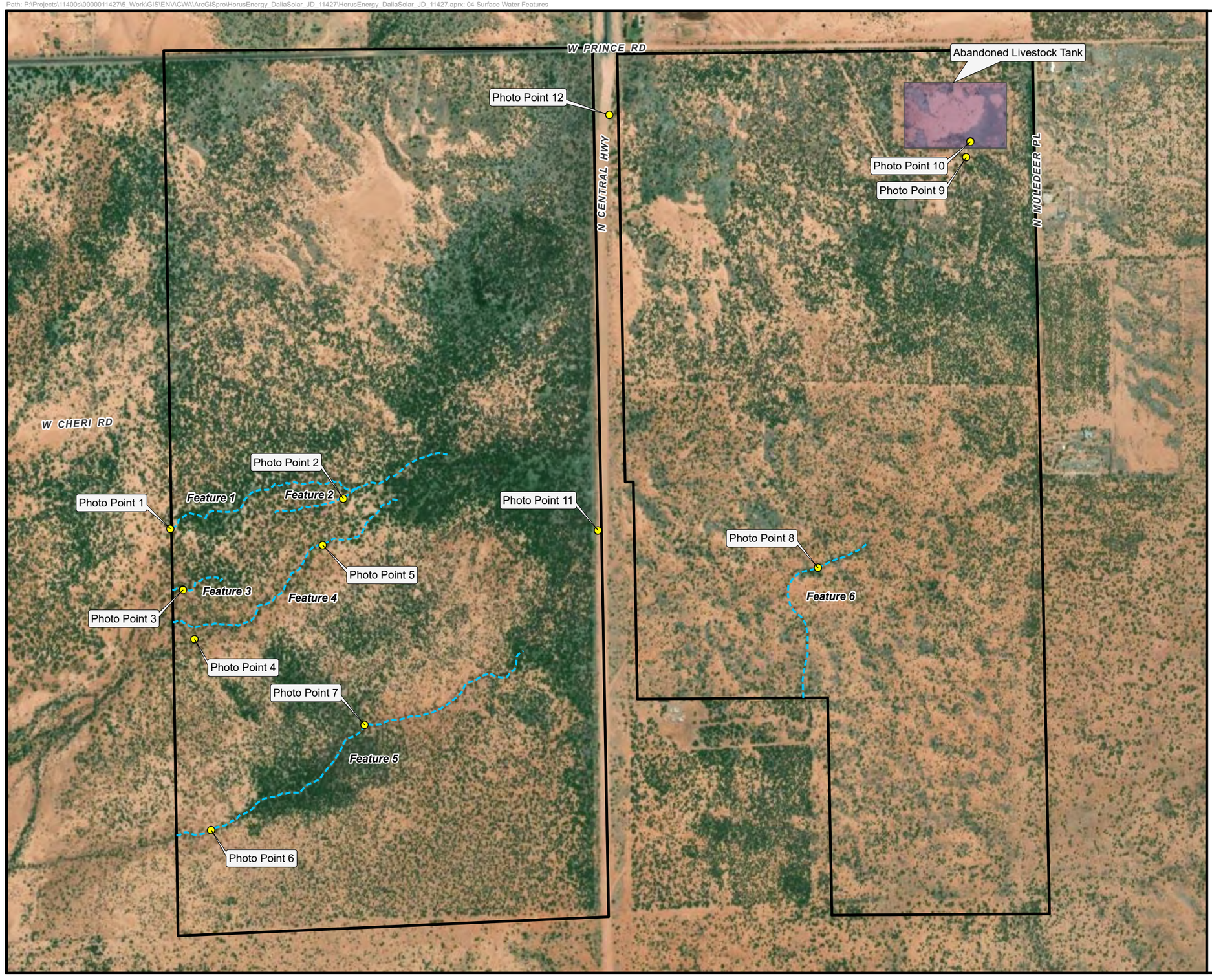
HORUS ENERGY

Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

REGIONAL OVERVIEW
Figure 3

Path: P:\Projects\11400s\000001142?5_Work\GIS\ENV\CWA\ArcGISpro\HorusEnergy_DaliaSolar_JD_11427\HorusEnergy_DaliaSolar_JD_11427.aprx: 04 Surface Water Features

Date: 2/1/2024 User: evinson



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Projection: NAD 1983 UTM Zone 12N
Image Source: Maxar 06/02/2023-06/07/2023

Legend

- Photo Point
- Exempt Swale Abandoned
- Livestock Tank
- Review Area

N

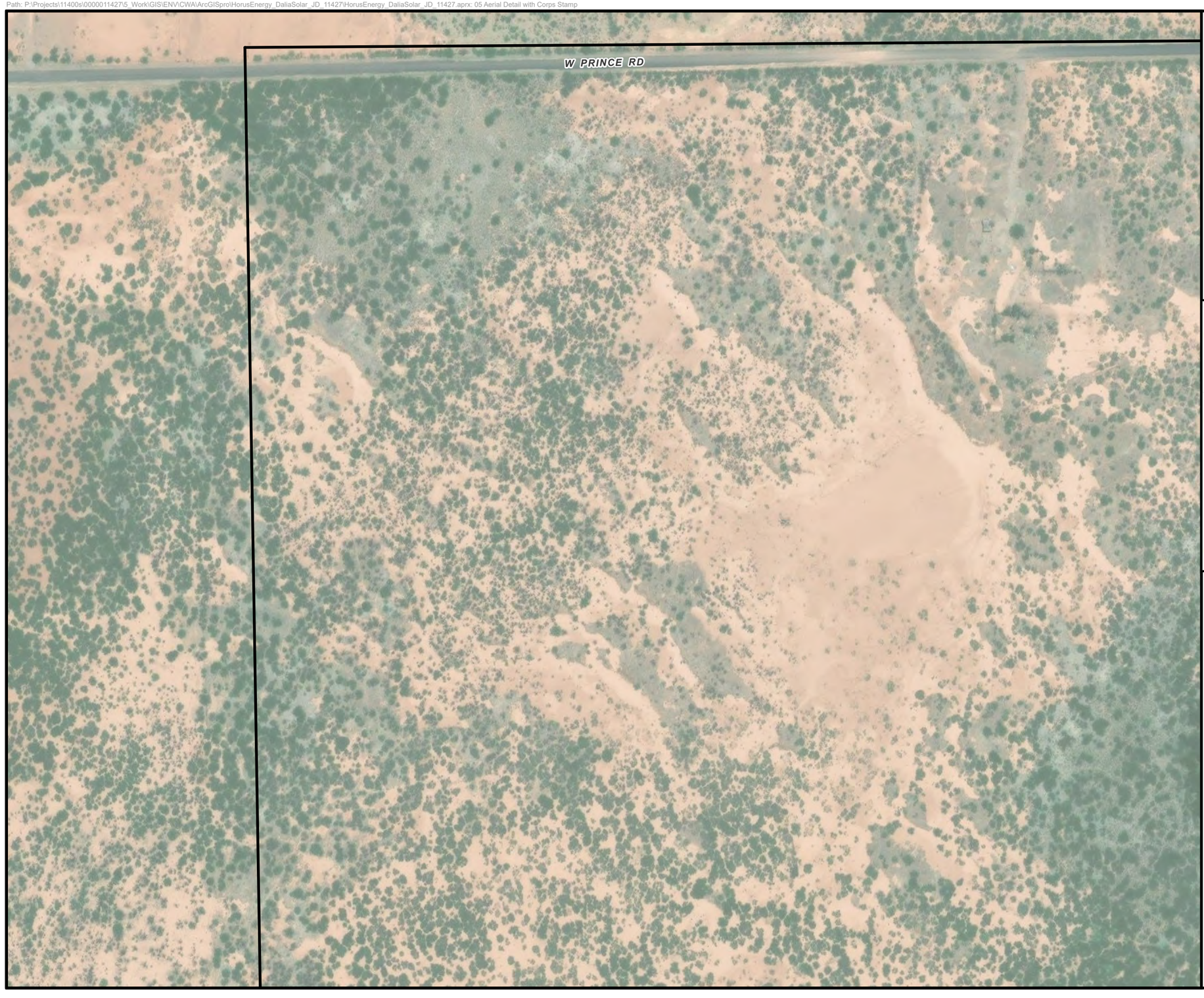
0 300 600 Feet

0 100 200 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

SURFACE WATER FEATURES
WITH PHOTO POINT LOCATIONS
Figure 4



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

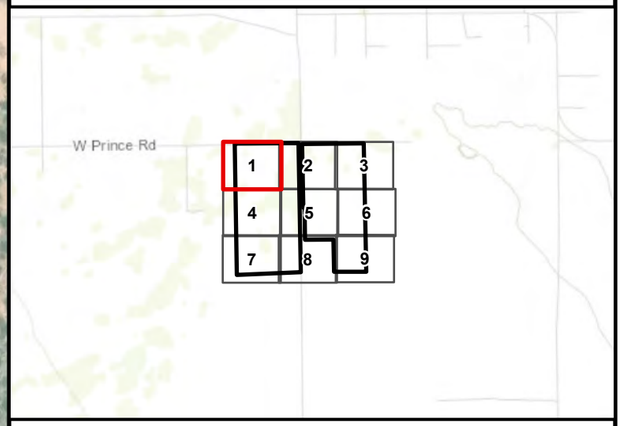
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *1* of *9*



T23S, R26E, Portions of Sections 4 and 9,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Project Location

N

0 100 200 Feet

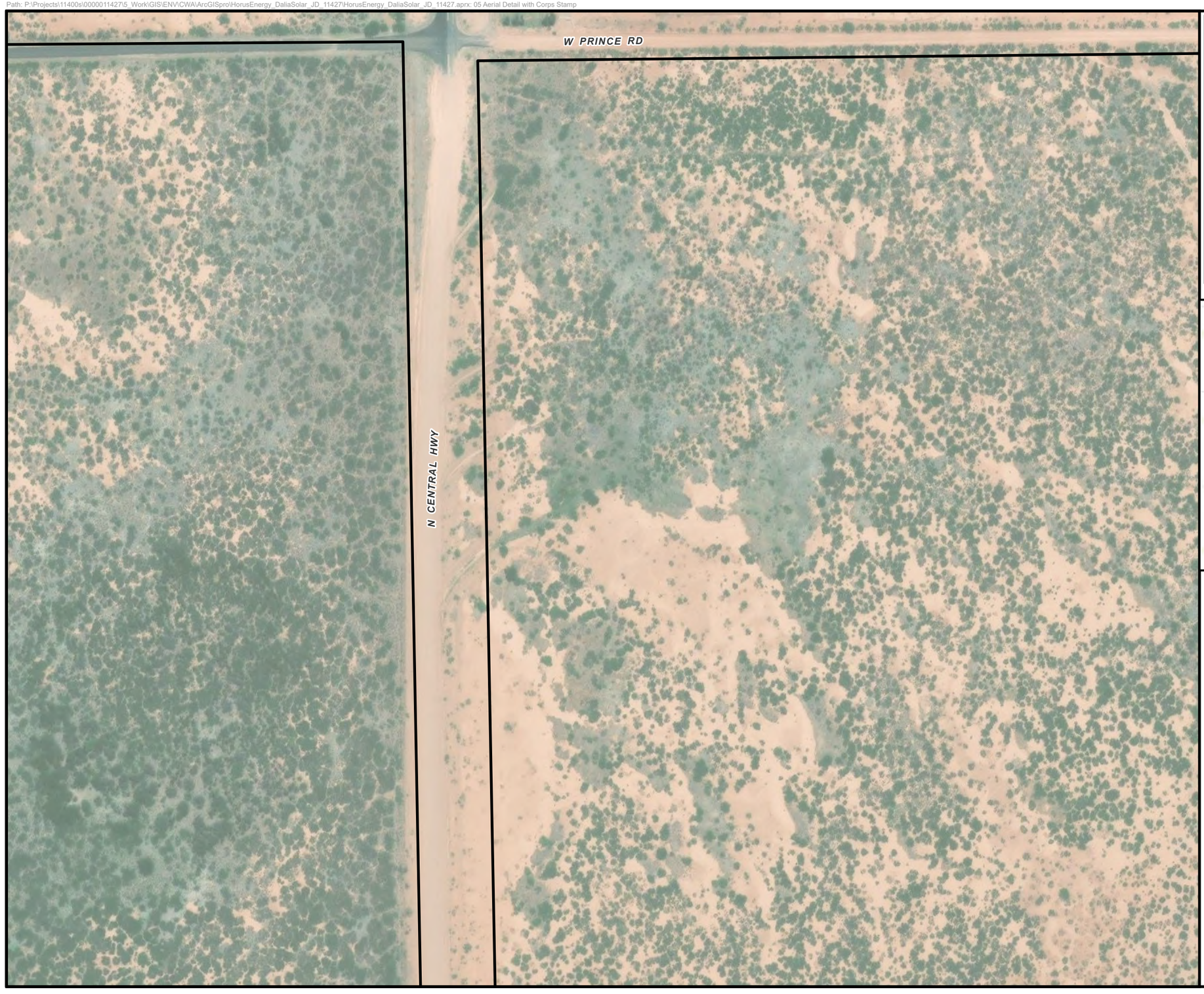
0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION

Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

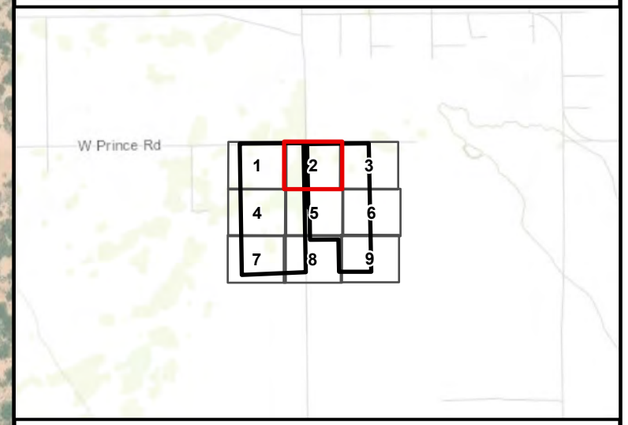
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *2* of *9*



T23S, R26E, Portions of Sections 3, 4, 9, and 10,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Project Location

N

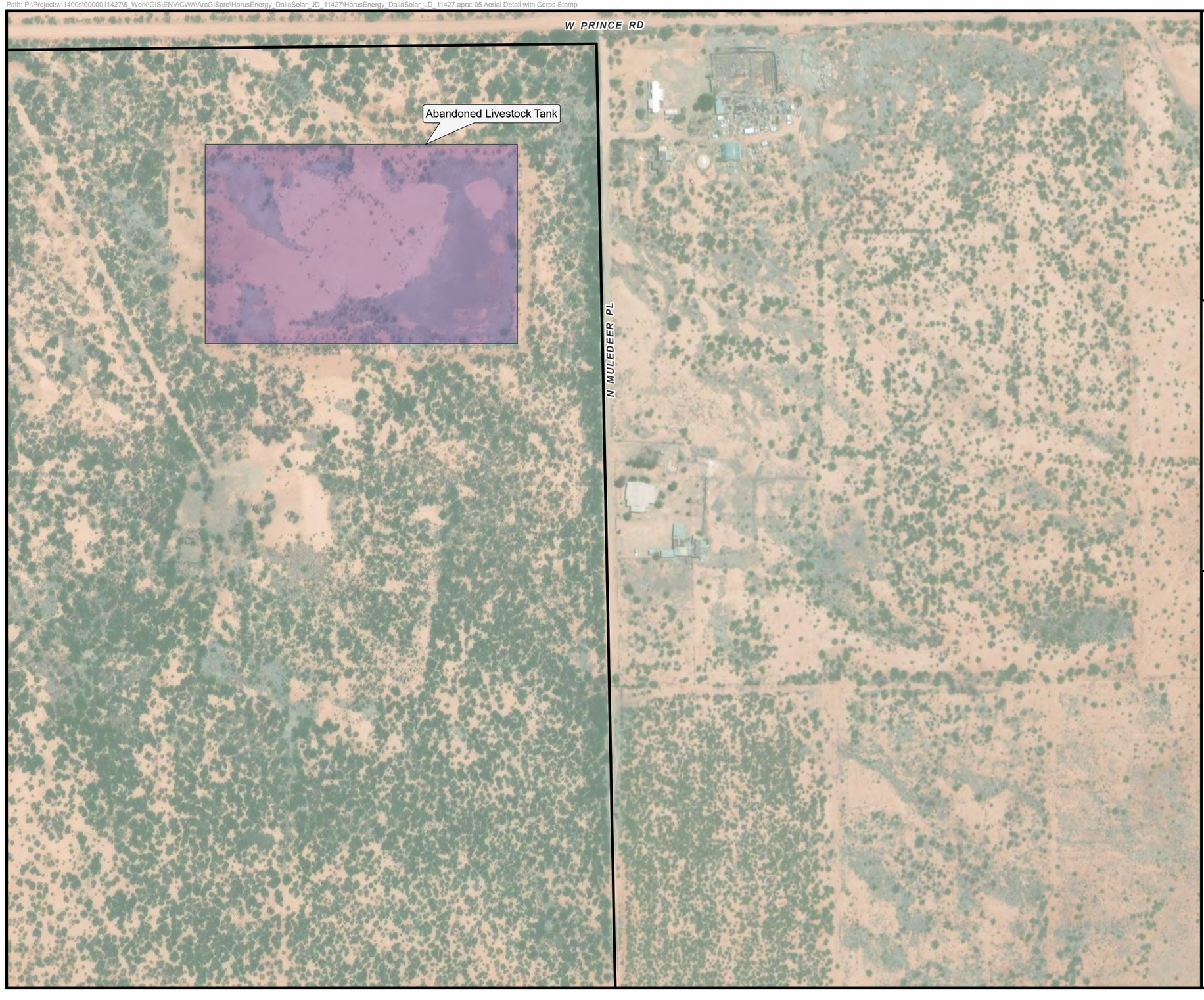
0 100 200 Feet

0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

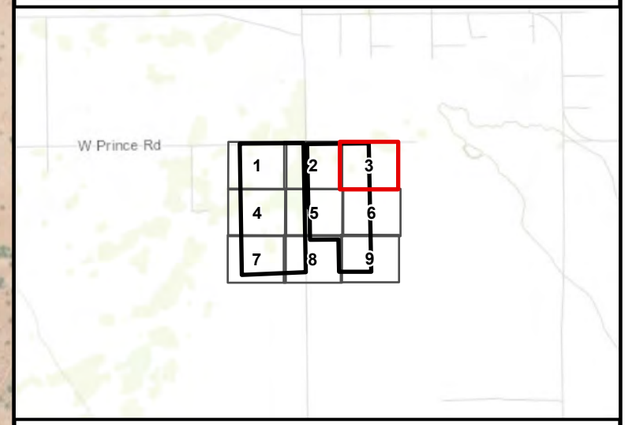
OHWM DELINEATION
Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

- Boundary of area surveyed for jurisdictional waters of the United States
- Ordinary High Water Mark
- Waters of the United States
- Wetland Boundary (If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *3* of *9*



T23S, R26E, a Portion of Section 10,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023, 06/07/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

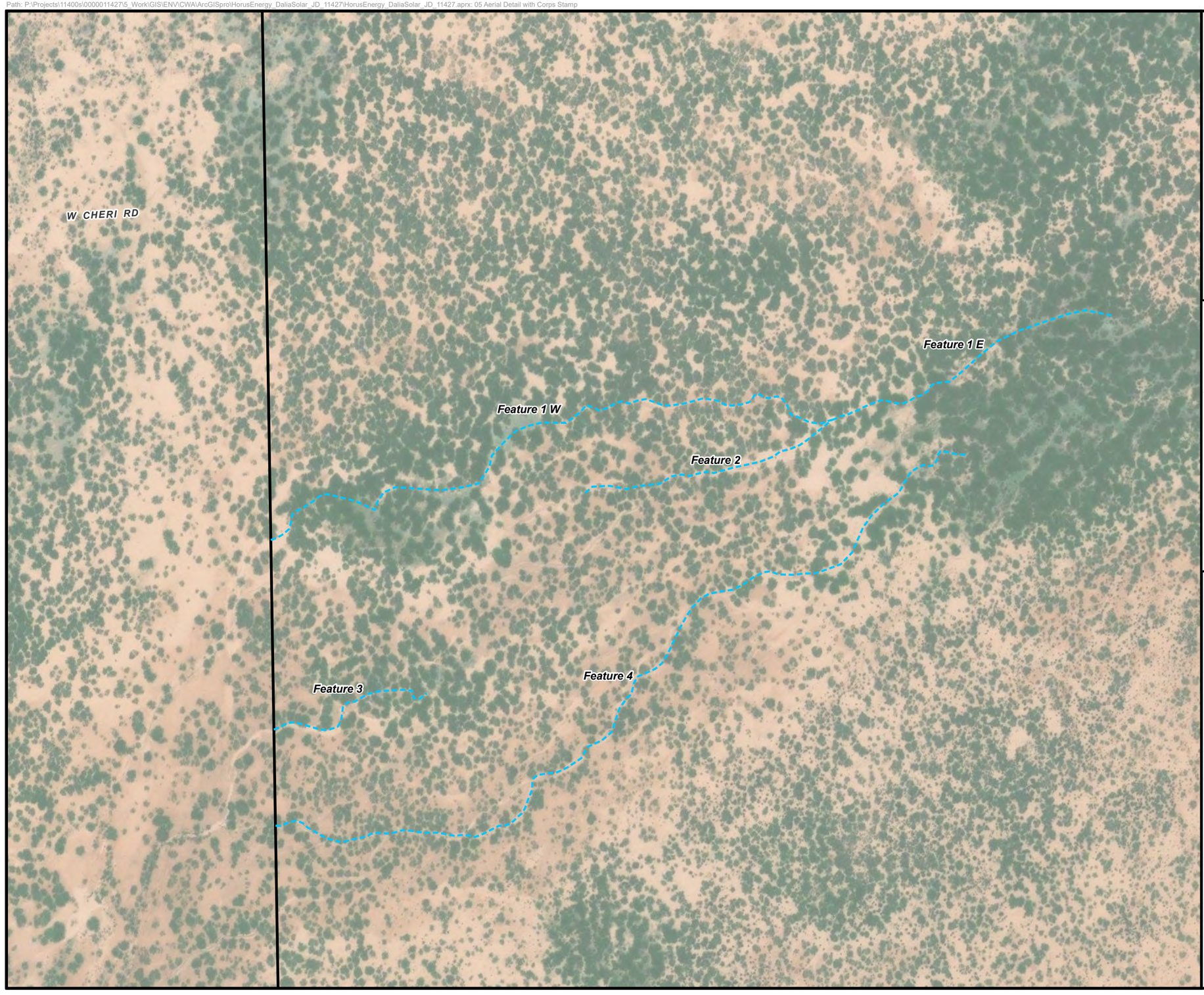
Legend

- Abandoned Livestock Tank
- Project Location

N
0 100 200 Feet
0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination
OHWM DELINEATION
Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

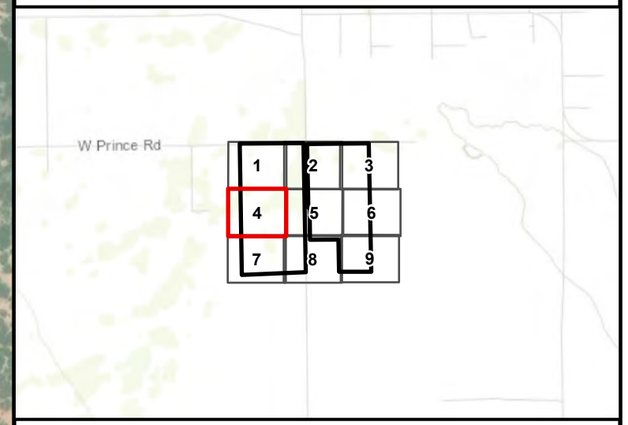
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *4* of *9*



T23S, R26E, a Portion of Section 9,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Exempt Swale

Project Location

N

0 100 200 Feet

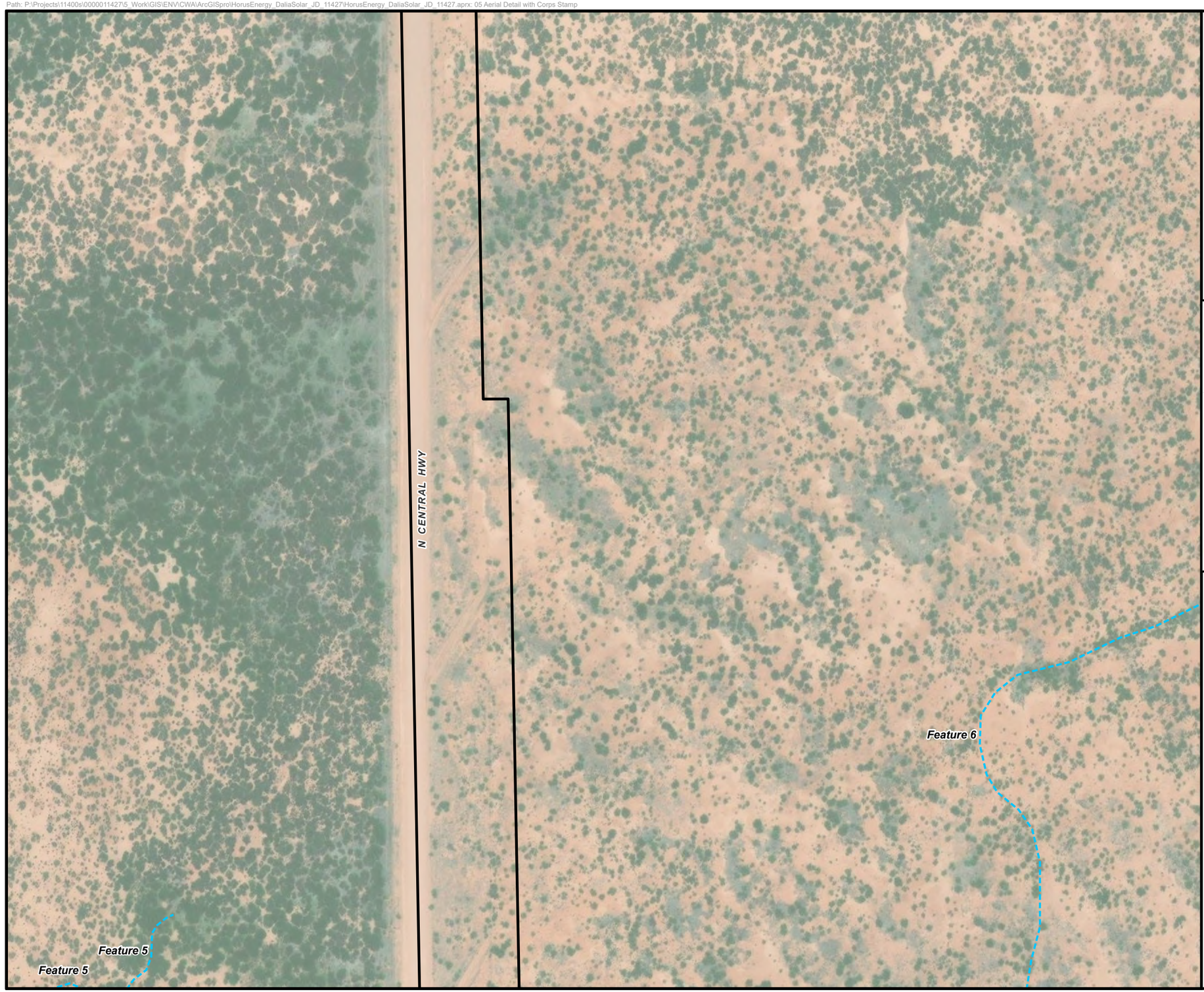
0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION

Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

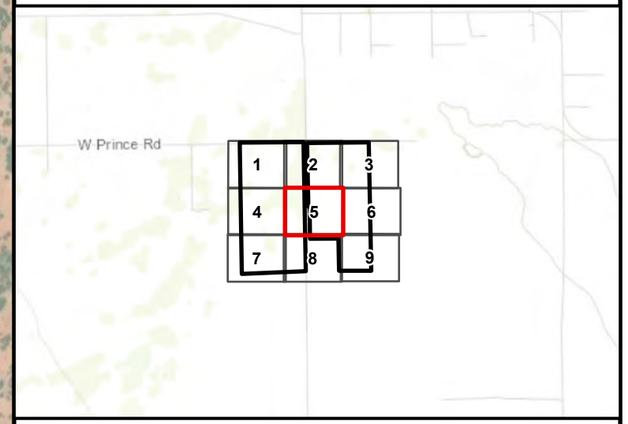
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *5* of *9*



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Exempt Swale

Project Location

N

0 100 200 Feet

0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION
Figure 5

APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

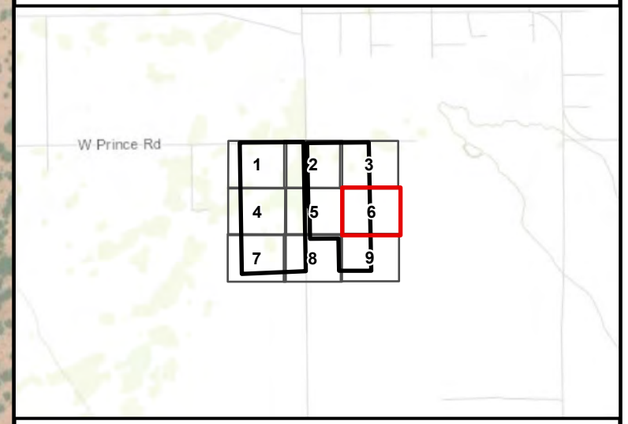
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *6* of *9*



T23S, R26E, a Portion of Section 10,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023, 06/07/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Exempt Swale

Project Location

N

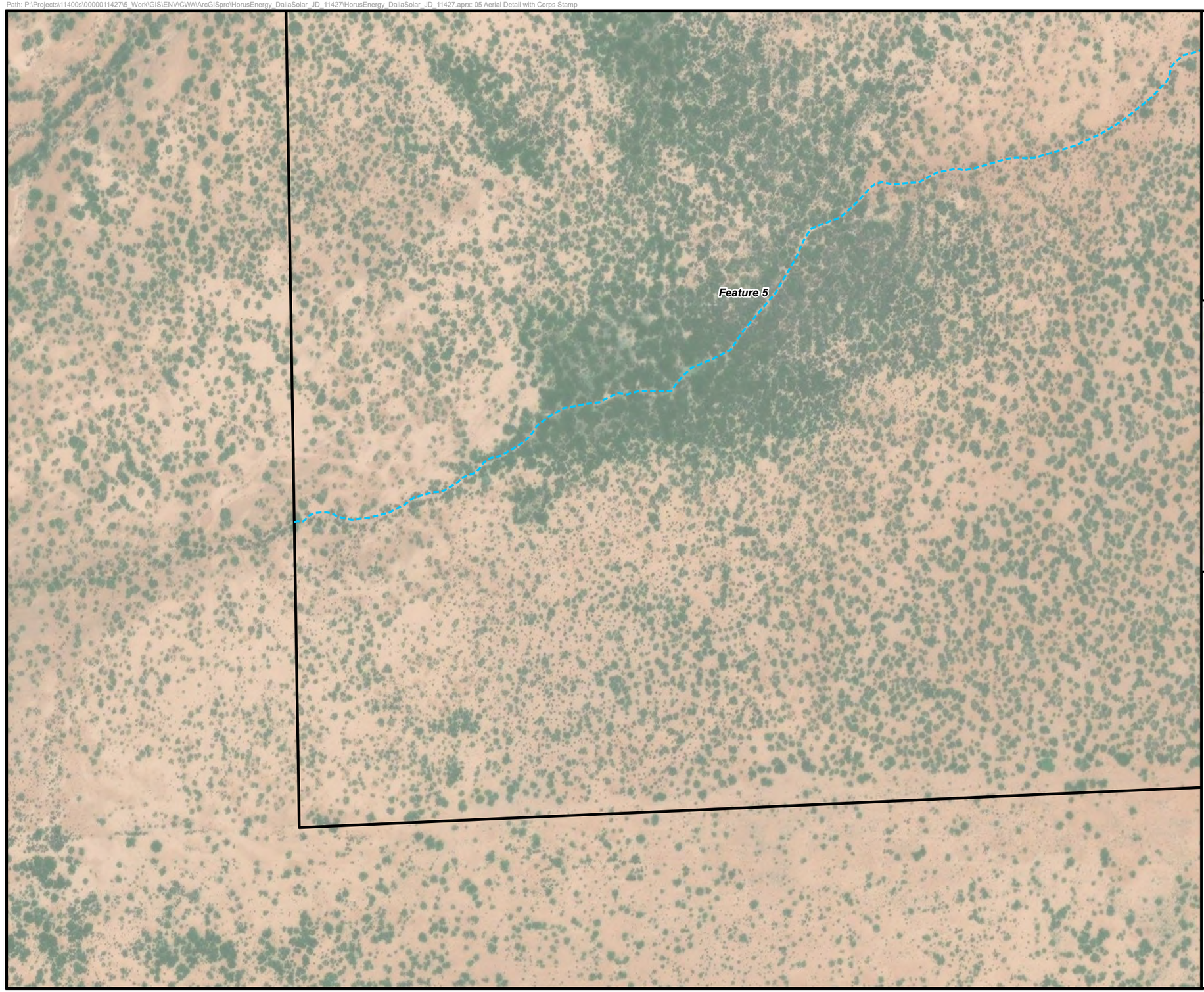
0 100 200 Feet

0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION
Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

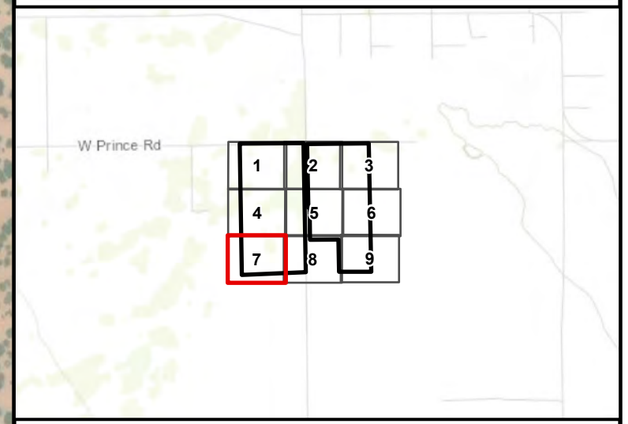
200' Scale *2023* Date of Photograph

_____ Site Visit by Corps (Y/N) Date:_____

_____Date Delineation issued by Corps

_____Corps Project Manager

Sheet *7* of *9*



T23S, R26E, Portions of Sections 9 and 16
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Exempt Swale

Project Location

N

0 100 200 Feet

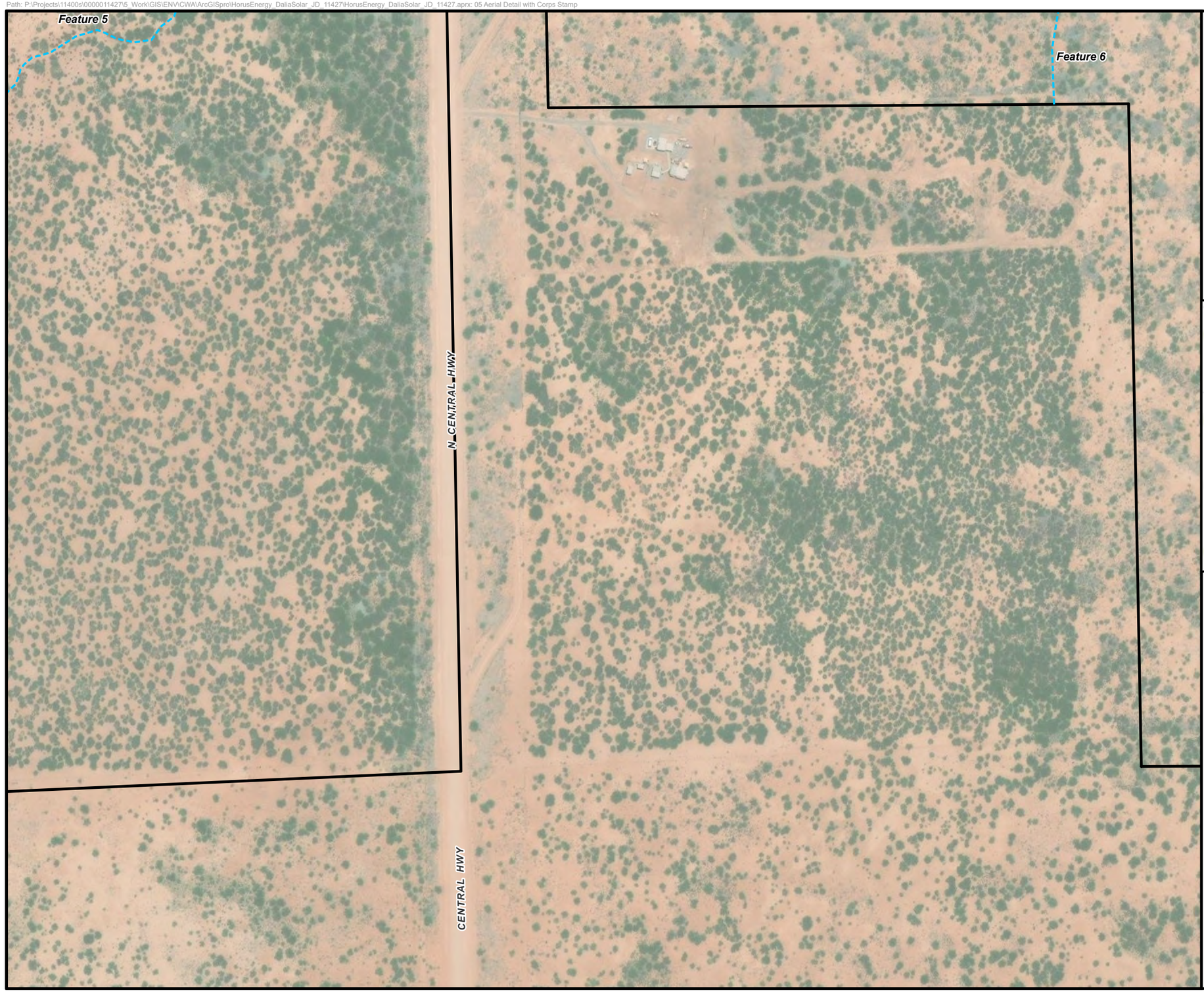
0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION

Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

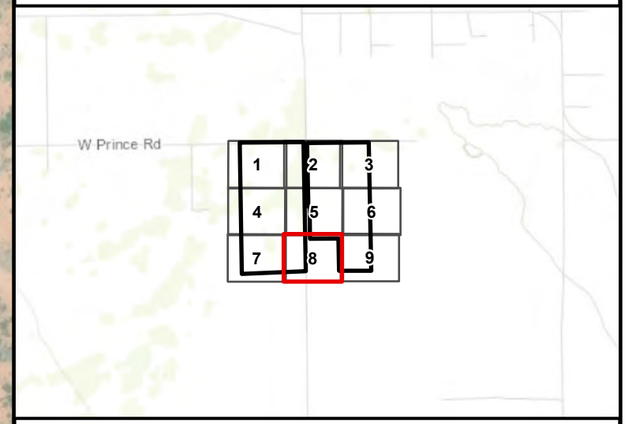
Boundary of area surveyed for jurisdictional waters of the United States

Ordinary High Water Mark

Waters of the United States

Wetland Boundary
(If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *8* of *9*



T23S, R26E, Portions of Sections 9, 10, 15, and 16,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Exempt Swale

Project Location

N

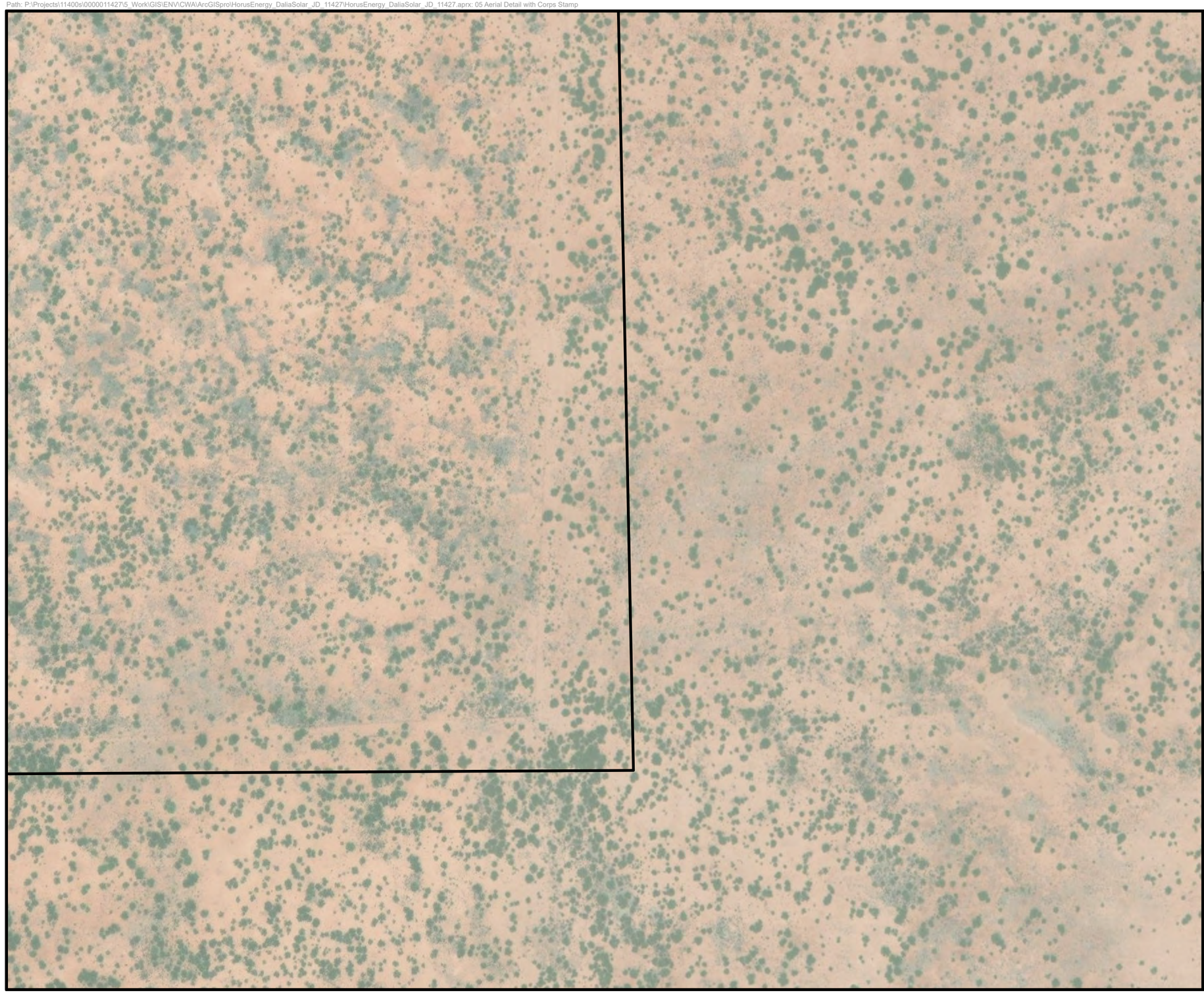
0 100 200 Feet

0 30 60 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

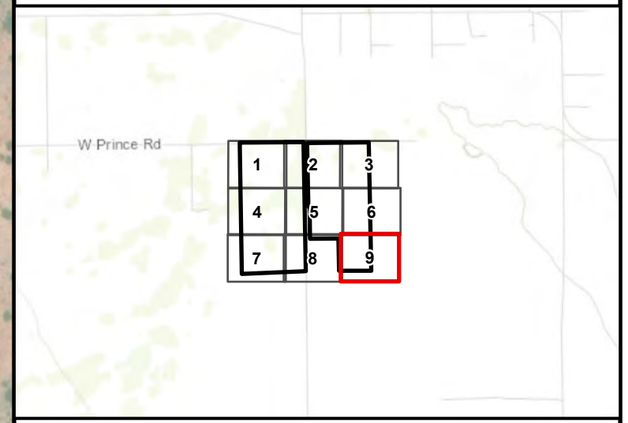
OHWM DELINEATION
Figure 5



APPROVED JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -_____-_____-_____

- Boundary of area surveyed for jurisdictional waters of the United States
- Ordinary High Water Mark
- Waters of the United States
- Wetland Boundary (If legend is blank no wetlands occur in survey area)

200' Scale *2023* Date of Photograph
_____ Site Visit by Corps (Y/N) Date:_____
_____Date Delineation issued by Corps
_____Corps Project Manager
Sheet *9* of *9*



T23S, R26E, a Portion of Section 10,
Cochise County, Arizona
Image Sources: Maxar 06/02/2023, 06/07/2023,
ArcGIS Online World Topo
Projection: NAD 1983 UTM Zone 12N

Legend

Project Location

N
0 100 200 Feet
0 30 60 Meters

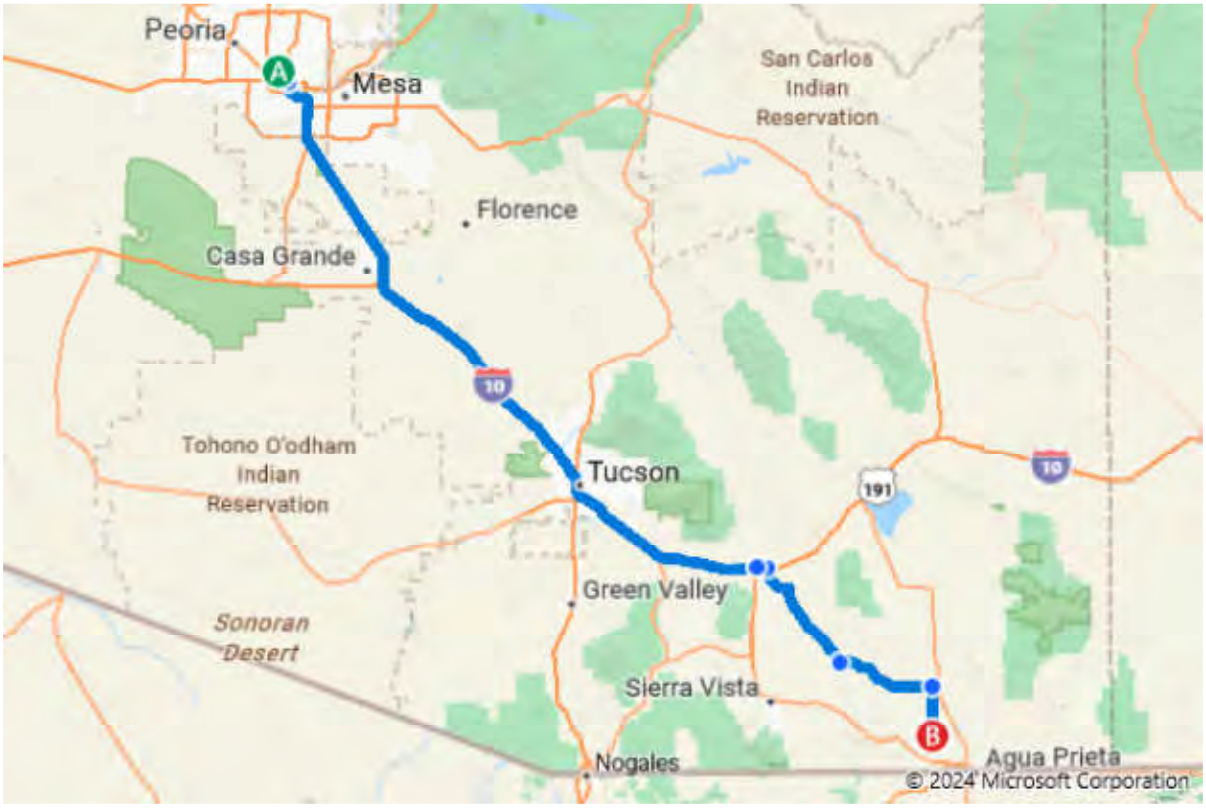
WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Parcels 407-17-001 and 407-18-003
Approved Jurisdictional Determination

OHWM DELINEATION
Figure 5

ATTACHMENT 3
Directions to Analysis Area

Maps



3 h 41 min • 223.9 mi
Light traffic (14 min delay)
via AZ-51 S, I-10 E and I-10 E/US-60 E

3636 N Central Ave, Phoenix, AZ 85012
3636 N Central Ave, Phoenix, AZ 85012

Head southwest

194 ft
Turn left

217 ft
Turn left onto W Whitton Ave

0.4 mi
Turn left onto N 3rd St

0.3 mi
Turn right onto E Indian School Rd

1.4 mi
Keep right onto AZ-51 South

0.3 mi
Enter the freeway AZ-51 S from the right

1.9 mi
Keep right and leave the freeway

0.5 mi
Enter the freeway I-10 E from the right

156.2 mi
Keep right and leave the freeway at exit 303 towards I-10 Bus Loop/AZ-80 East/Douglas/Tombstone

0.6 mi
Keep left onto W 4th St

1.7 mi
Keep right onto S Highway 80

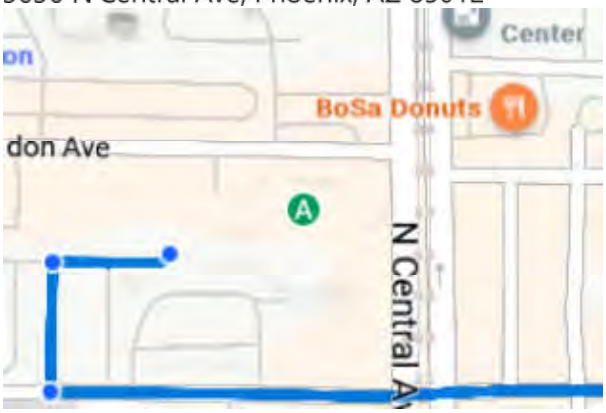
27.4 mi
Turn left onto E Davis Rd

22.4 mi
Turn right onto N Central Hwy

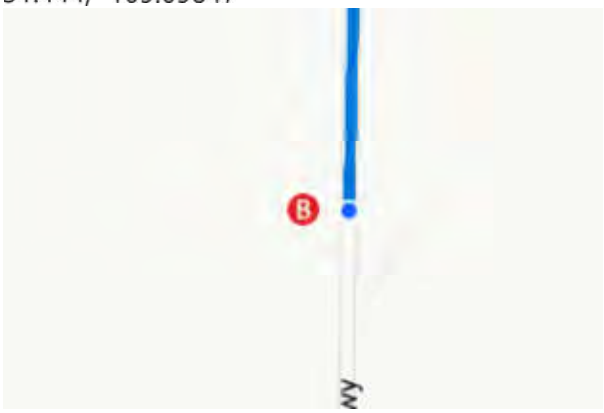
10.7 mi
Your destination is on the right

31.444, -109.69847
31.444, -109.69847

3636 N Central Ave, Phoenix, AZ 85012



31.444, -109.69847



ATTACHMENT 4
Representative Ground Photographs

Photo 01.
Feature: 1
OHWM: None
Width: N/A
View: Northeast
Notes: Exempt swale, central portion of west parcel near western Review Area boundary; vegetation is Chihuahuan desert scrub, *Prosopis glandulosa, Vachellia constricta, Flourensia cernua*.

Photo 02.
Feature: 2
OHWM: None
Width: N/A
View: West
Notes: Exempt swale, central portion of west parcel; Mule Mountains in photo background.

Photo 03.
Feature: 3
OHWM: None
Width: N/A
View: West
Notes: Exempt swale, central portion of west parcel near western Review Area boundary.

Photo 04.
Feature: 4
OHWM: None
Width: N/A
View: East
Notes: Exempt swale, central portion of west parcel near western Review Area boundary.

Photo 05.
Feature: 4
OHWM: None
Width: N/A
View: Southwest
Notes: Exempt swale, central portion of west parcel; Mule Mountains in photo background.

Photo 06.
Feature: 5
OHWM: None
Width: N/A
View: West
Notes: Exempt swale, southern portion of west parcel near western Review Area boundary; Mule Mountains in photo background.

Photo 07.
Feature: 5
OHWM: None
Width: N/A
View: Northeast
Notes: Exempt swale, southern portion of west parcel; Pedregosa Mountains in photo background.

Photo 08.
Feature: 6
OHWM: None
Width: N/A
View: West
Notes: Exempt swale, southern portion of east parcel.

Photo 9.
Feature: Abandoned livestock tank
OHWM: N/A
Width: N/A
View: NE
Notes: Livestock tank, photo center, northeast corner of eastern parcel; *Yucca elata*, photo foreground, Pedregosa Mountains, photo background.

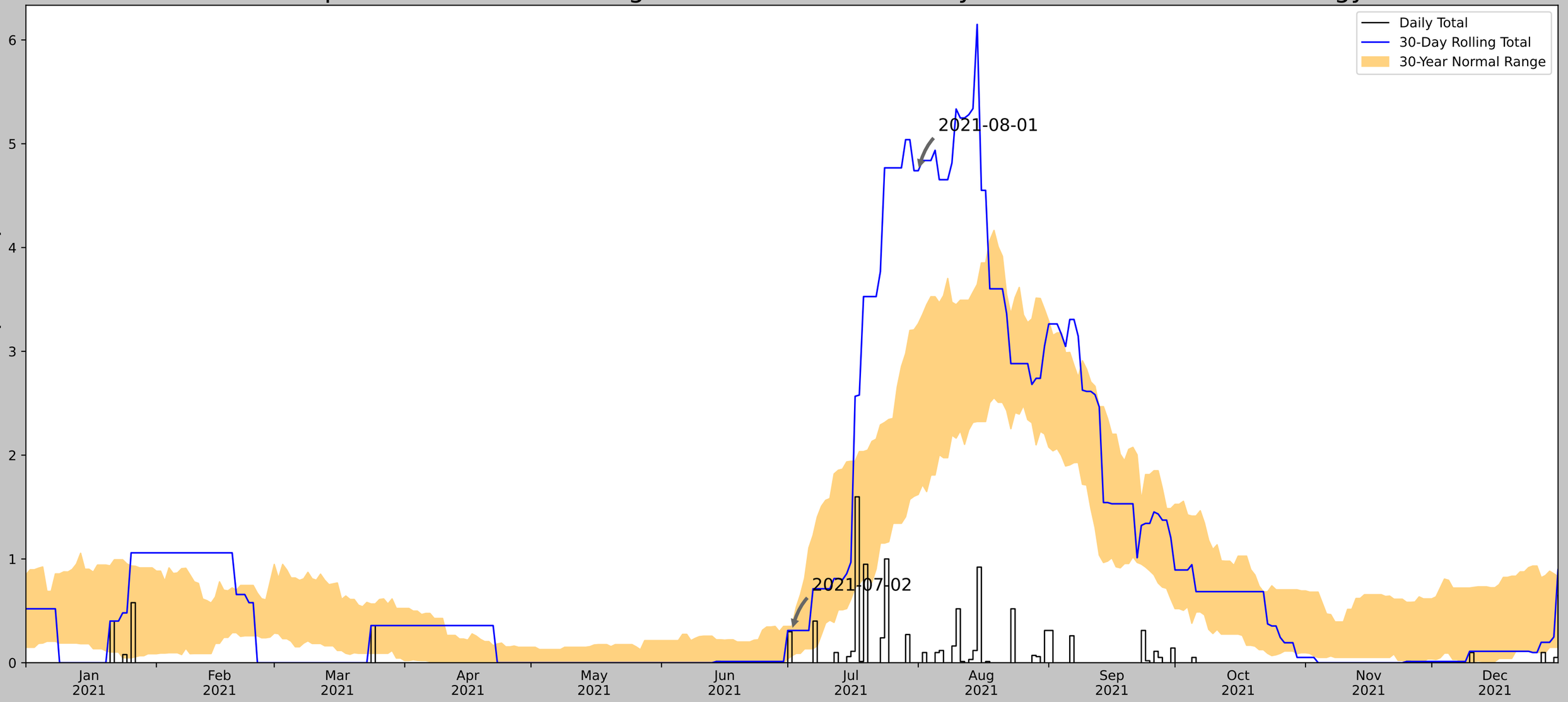
Photo 10.
Feature: Abandoned livestock tank
OHWM: N/A
Width: N/A
View: Northeast
Notes: Livestock tank floor, northeast corner of eastern parcel; *Aristida ternipes* (dominant species), Hopia *obtusa*, *Xanthium strumarium.*

Photo 11.
Feature: N Central Highway
OHWM: N/A
Width: N/A
View: North
Notes: N Central Highway situated between western (photo left) and eastern (photo right) Review Area parcels.

Photo 12.
Feature: Roadside drainage ditch
OHWM: N/A
Width: N/A
View: Northeast
Notes: Drainage ditch, east side of N Central Highway near northwest corner of east parcel (photo right).

ATTACHMENT 5
Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	31.444000, -109.69847
Observation Date	2021-08-01
Elevation (ft)	4032.127
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-01	1.62126	3.266929	4.740158	Wet	3	3	9
2021-07-02	0.067323	0.350787	0.311024	Normal	2	2	4
2021-06-02	0.0	0.21378	0.0	Normal	2	1	2
Result							Wetter than Normal - 15

US Army Corps of Engineers

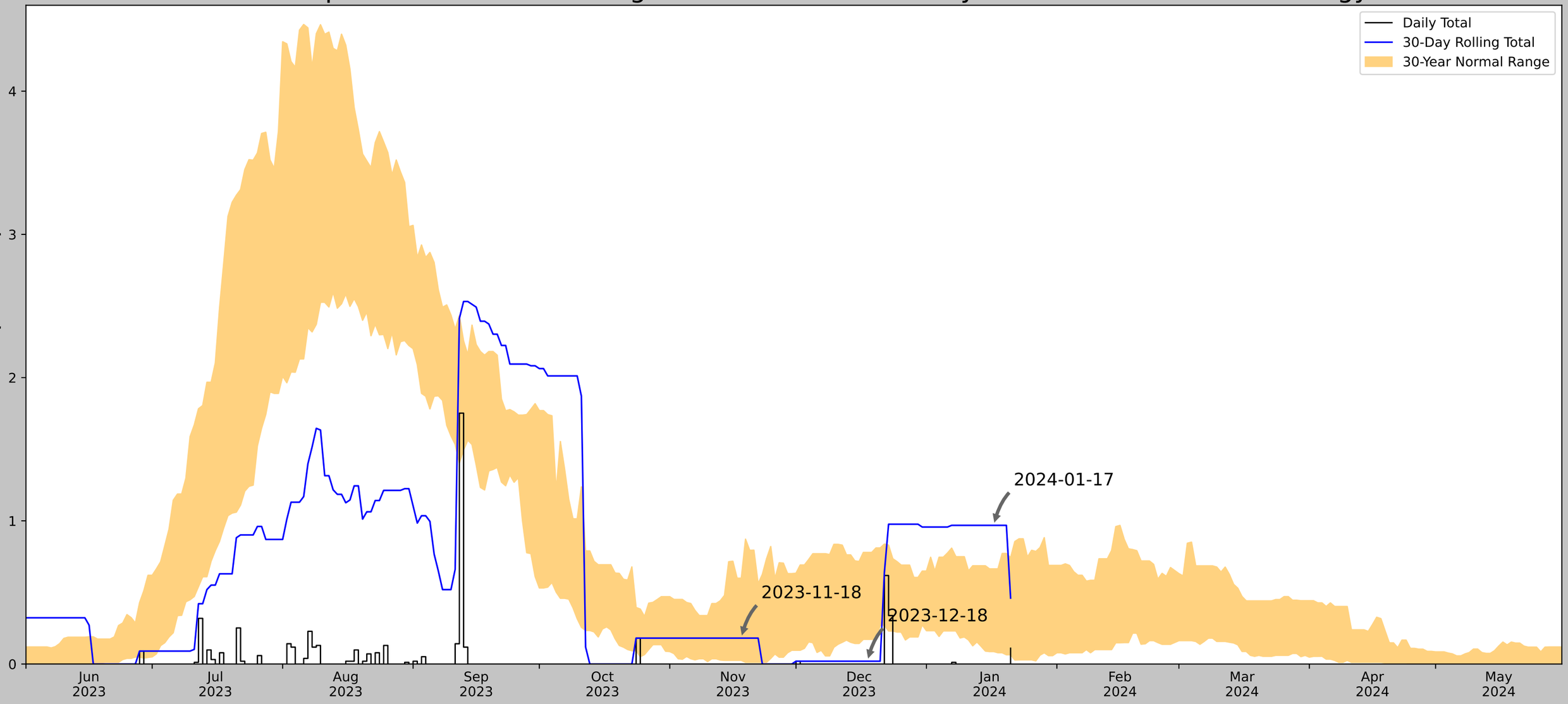
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MC NEAL	31.6017, -109.6686	4169.948	11.037	137.821	6.488	10712	86
DOUGLAS 8.8 NNW	31.4583, -109.5969	4105.971	10.77	63.977	5.536	167	0
DOUGLAS (BISBEE) INTL AP	31.4583, -109.6067	4094.16	10.557	75.788	5.551	470	0
DOUGLAS 7.3 WNW	31.3688, -109.6594	4070.866	16.101	99.082	8.841	4	0
DOUGLAS 1.0 E	31.3411, -109.5226	4087.927	19.956	82.021	10.617	0	4

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	31.444000, -109.69847
Observation Date	2024-01-17
Elevation (ft)	4032.127
Drought Index (PDSI)	Not available
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-01-17	0.087008	0.664567	0.968504	Wet	3	3	9
2023-12-18	0.172441	0.779528	0.019685	Dry	1	2	2
2023-11-18	0.025591	0.599606	0.181102	Normal	2	1	2
Result							Normal Conditions - 13

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DOUGLAS (BISBEE) INTL AP	31.4583, -109.6067	4094.16	5.499	62.033	2.815	10530	90
DOUGLAS 7.3 WNW	31.3688, -109.6594	4070.866	6.921	23.294	3.276	136	0
DOUGLAS 1.0 E	31.3411, -109.5226	4087.927	9.496	6.233	4.332	676	0
DOUGLAS	31.345, -109.5394	4040.026	8.777	54.134	4.425	4	0
DOUGLAS 0.8 WNW	31.3447, -109.5518	3988.845	8.491	105.315	4.715	6	0

ATTACHMENT 6
APT Selected Imagery

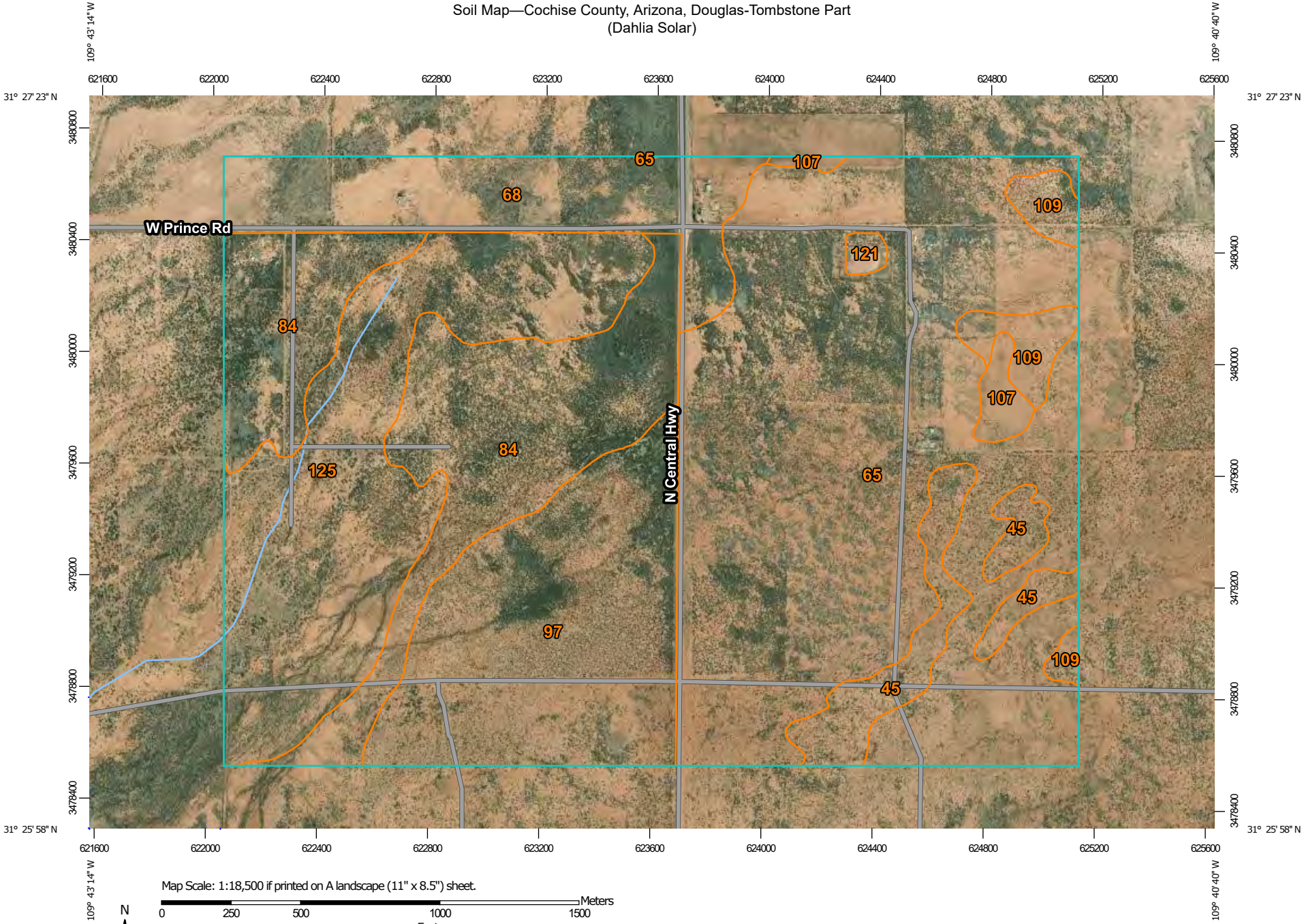
Image 1.
Review Area, Google Earth image, September 2023 during a period of relatively normal rainfall.

Image 2.
Review Area, Google Earth image, October 2021 during a wetter than normal period.

Image 3.
Whitewater Draw in vicinity of Review Area (eastern parcel, photo left corner), Google Earth image, October 2021 during a wetter than normal period.

ATTACHMENT 7
USGS Soil Data

Soil Map—Cochise County, Arizona, Douglas-Tombstone Part
(Dahlia Solar)



Map Scale: 1:18,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 250 500 1000 1500

Feet
0 500 1000 2000 3000

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: Cochise County, Arizona, Douglas-Tombstone Part
Survey Area Data: Version 19, Sep 8, 2023

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

Date(s) aerial images were photographed: Jan 3, 2015—Jun 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
45	Diaspar sandy loam, 0 to 2 percent slopes	66.5	4.0%
65	Forrest clay loam, 1 to 3 percent slopes	628.9	37.7%
68	Forrest silt loam, 0 to 1 percent slopes	140.9	8.5%
84	Guest-Riveroad association, 0 to 1 percent slopes	261.9	15.7%
97	Libby-Gulch complex, 0 to 10 percent slopes	235.3	14.1%
107	McAllister loam, 1 to 3 percent slopes	14.7	0.9%
109	McNeal gravelly sandy loam, 1 to 3 percent slopes	36.4	2.2%
121	Pits	4.9	0.3%
125	Riveroad and Ubik soils, 0 to 5 percent slopes	277.5	16.6%
Totals for Area of Interest		**1,667.1**	**100.0%**

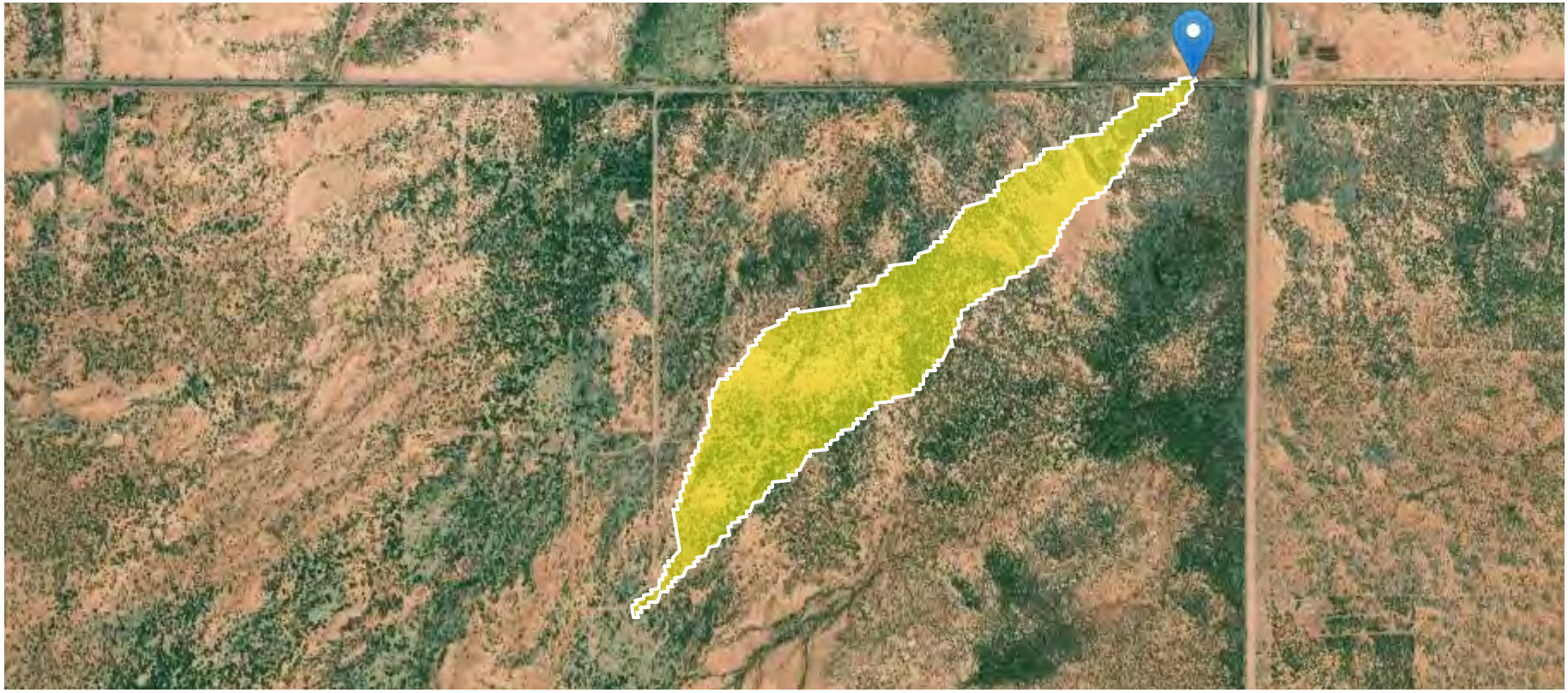
Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
45	Diaspar sandy loam, 0 to 2 percent slopes	0	66.5	4.0%
65	Forrest clay loam, 1 to 3 percent slopes	0	628.9	37.7%
68	Forrest silt loam, 0 to 1 percent slopes	0	140.9	8.5%
84	Guest-Riveroad association, 0 to 1 percent slopes	0	261.9	15.7%
97	Libby-Gulch complex, 0 to 10 percent slopes	0	235.3	14.1%
107	McAllister loam, 1 to 3 percent slopes	0	14.7	0.9%
109	McNeal gravelly sandy loam, 1 to 3 percent slopes	0	36.4	2.2%
121	Pits	0	4.9	0.3%
125	Riveroad and Ubik soils, 0 to 5 percent slopes	0	277.5	16.6%
Totals for Area of Interest			**1,667.1**	**100.0%**

ATTACHMENT 8
StreamStats
Output

StreamStats Report Dahlia Solar - North Basin

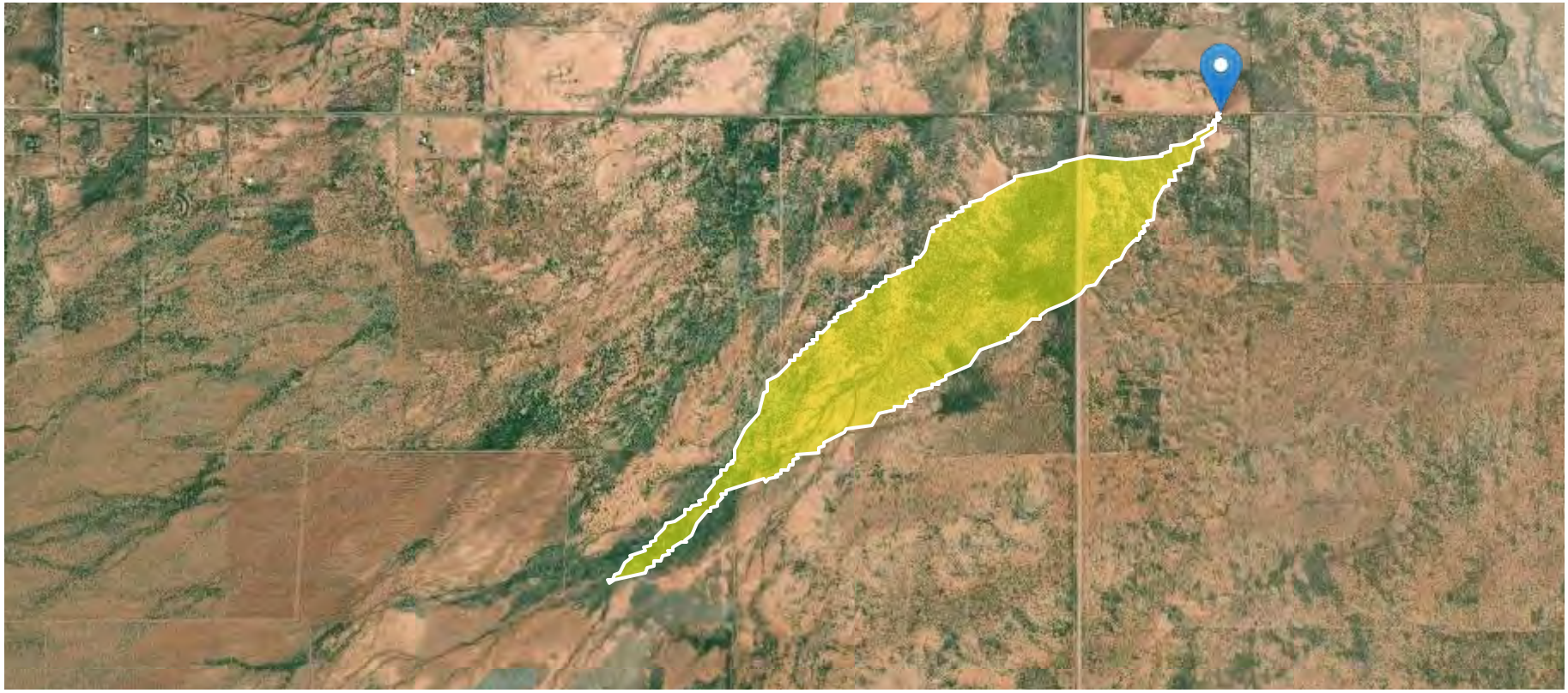
Region ID: AZ
Workspace ID: AZ20240202171857127000
Clicked Point (Latitude, Longitude): 31.45239, -109.69977
Time: 2024-02-02 10:19:26 -0700



Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	0.12	square miles

StreamStats Report Dahlia Solar - Central Basin

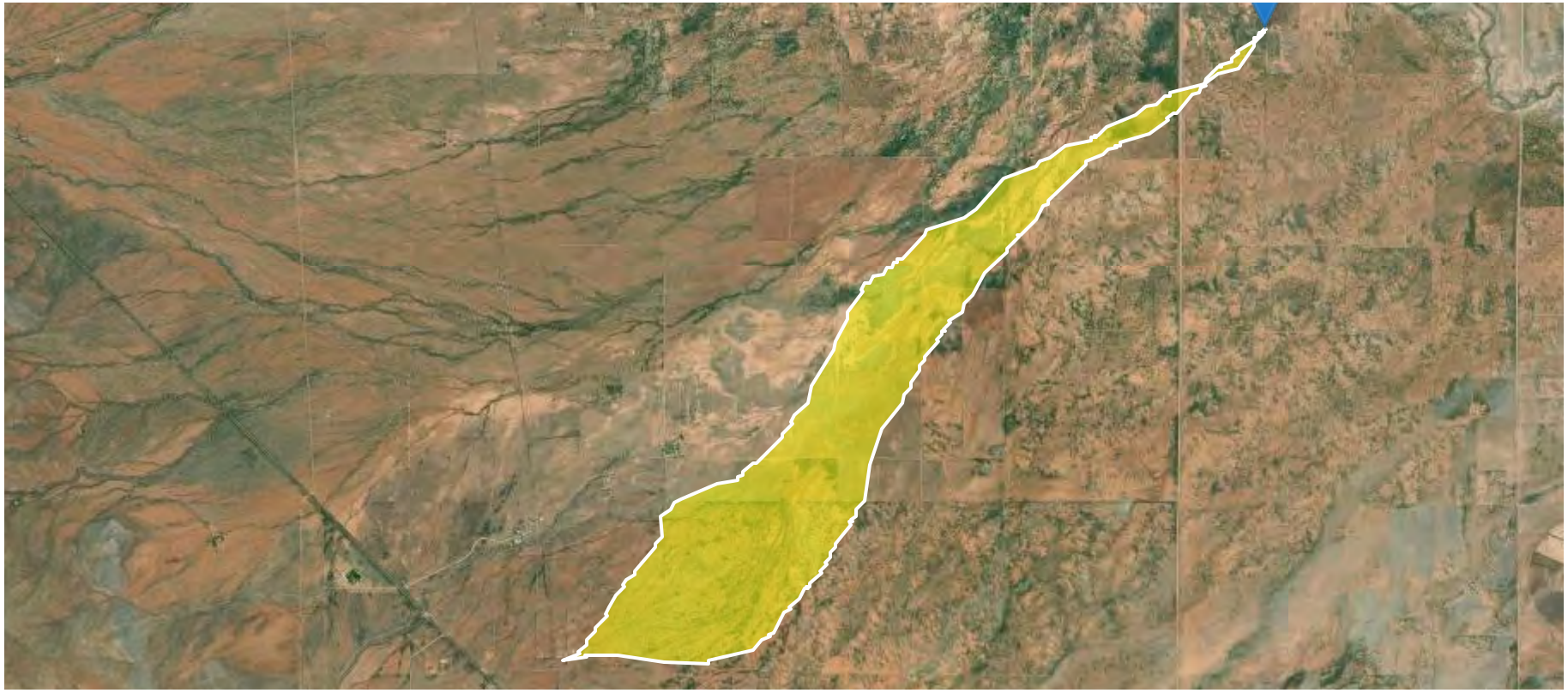
Region ID: AZ
Workspace ID: AZ20240202170628463000
Clicked Point (Latitude, Longitude): 31.45241, -109.69119
Time: 2024-02-02 10:06:53 -0700



			Value	Unit
>	CONTDA	Area that contributes flow to a point on a stream	0.49	square miles

StreamStats Report Dahlia Solar - South Basin (north)

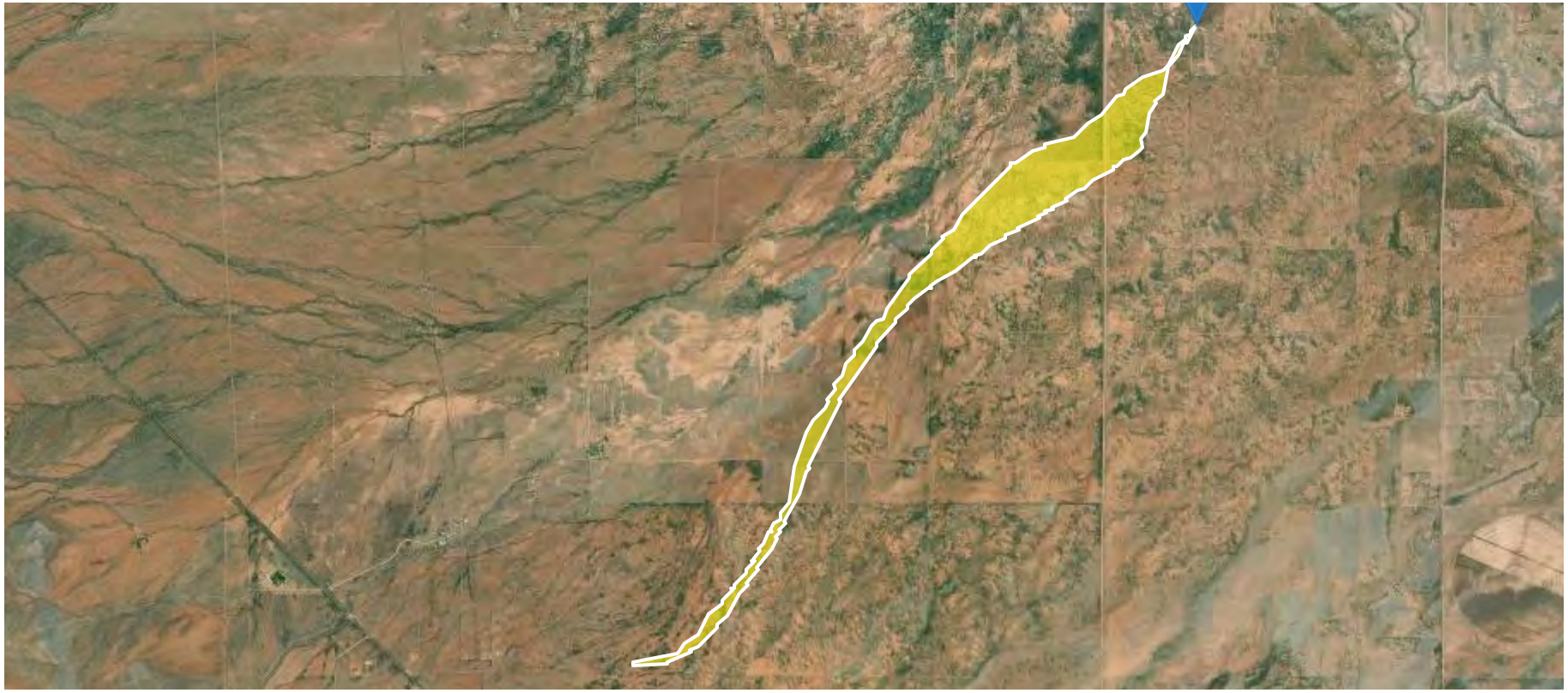
Region ID: AZ
Workspace ID: AZ20240202173202571000
Clicked Point (Latitude, Longitude): 31.44891, -109.68986
Time: 2024-02-02 10:32:28 -0700



		Value	Unit
CONTDA	Area that contributes flow to a point on a stream	2.3	square miles

StreamStats Report Dahlia Solar - South Basin

Region ID: AZ
Workspace ID: AZ20240202172439418000
Clicked Point (Latitude, Longitude): 31.44919, -109.68928
Time: 2024-02-02 10:25:12 -0700



Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	0.69	square miles

APPENDIX D
Biological Evaluation

Biological Evaluation of the Dahlia Solar Project

Prepared for:
Horus Energy AZ 1 LLC
16730 Creek Bend Drive – Sugar Land, Texas 77478

Prepared by:
WestLand Engineering & Environmental Services
4001 E. Paradise Falls Drive – Tucson, Arizona 85712
+1 520-206-9585

WestLand Project Number: 11427

February 22, 2024

WestLand Engineering & Environmental Services

Table of Contents

Tables

Figures

(follow text)

Appendices

1. INTRODUCTION

WestLand Engineering & Environmental Services (WestLand) was retained by Horus Energy/Horus Asset Management Ltd. (Horus) to develop a biological evaluation (BE) for the Dahlia Solar Project (Project), which is located near Prince Road and Central Highway south of Double Adobe, Arizona (**Figure 1**). The Project consists of the development of an 80-megawatt solar field covering approximately 591-acres that spans the existing roadway of Central Highway in unincorporated lands in Cochise County, Arizona (Project Area; **Figure 2**). The BE evaluates the potential of special-status species to occur within the Project Area and vicinity and the potential "take" of special-status species associated with this Project.[1] For the purposes of this BE, special-status species include those species listed, proposed for listing, or candidate for listing by the U.S. Fish and Wildlife Service (USFWS) as threatened or endangered under the Endangered Species Act (ESA) and species protected under the Bald and Golden Eagle Protection Act (BGEPA).

Solar power is an abundant renewable energy source, especially in Arizona where there continues to be an emphasis on developing clean energy to reduce dependency on fossil fuels. Many local utility companies have committed to renewable energy goals by incorporating additional solar projects into their power portfolios. Rather than simply address potential Project impacts to special-status species afforded state and federal protections, Horus intends to enhance biodiversity within the Project Area by minimizing site disturbance and incorporating environmental protection measures to benefit both native plants and wildlife specific to the site.

The following sections provide the Project Area location and description (**Section 2**), an overview of the Project Area (**Section 3**), environmental protection measures (**Section 4**), special-status species screening and take analysis methods (**Section 5**), results of the screening and take analyses (**Section 6**), and references cited (**Section 7**).

2. PROJECT AREA LOCATION AND DESCRIPTION

The Project Area is located in Sulphur Valley in unincorporated Cochise County approximately 1 mile south of the populated place of Double Adobe, Arizona (**Figures 1 and 2**). The Project parcels (407-18-003 and 407-17-001) are located in Township 23 South, Range 26 East, in portions of Sections 9 and 10, Gila Salt River Baseline and Meridian

The proposed Project consists of the development of an 80-megawatt photovoltaic (PV) array; a substation; associated access roads; an operations and maintenance building; existing onsite water well, construction laydown areas; and other ancillary components. The generation interconnect (gen-tie) will be limited to only the number of poles needed to interconnect the Project substation to the existing onsite power line and will

[1] "Take" as defined under the ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

utilize steel poles (rather than wood) at approximately the same height as existing poles. Project construction is expected to begin in 2027 and take approximately 12 to 18 months to complete.

Construction activities will include:

- Seasonal pre-construction surveys, as needed.
- Treatment of unpaved access road (dust palliative); access to the Project Area will use existing surface streets—Central Highway runs between the Project parcels, and Prince Road runs along north Project boundary.
- Installation of trailer(s) and designated laydown and materials storage areas.
- Fence installation.
- Mowing and vegetation removal with minimal grading—cross-grading of the Project Area will be limited to the 16 to 20-foot (ft)-wide access roads within the solar facility site and for the operations and maintenance area.
- Installation of any necessary drainage and erosion controls.
- PV panel/tracker assembly.
- Construction of PV arrays, gen-tie line, substation, and other ancillary facilities onsite.

The Project is proposed to produce power generation for approximately 40 years, after which a decommissioning plan would be implemented.

3. PROJECT AREA

3.1. PHYSIOGRAPHIC

The Project Area is located in the Basin and Range Physiographic province, characterized by northwest-southeast trending mountain ranges and intervening alluvial basins and is within the Rillito physiographic area (Trapp and Reynolds 1995). The Project Area is located on flat ground with an elevation range between approximately 4,010 and 4,040 ft above mean sea level (amsl).

3.2. CLIMATE

Mean annual precipitation and mean annual temperatures in the vicinity of the Project Area were obtained from the Western Regional Climate Center (WRCC) based on data collected at the nearby National Climate Data Center (NCDC) station. The NCDC Douglas FAA AP, Arizona Station (Station ID 022664) is located at 4,010 ft amsl in elevation which is similar to the Project Area. The mean annual precipitation (rain) is 13.07 inches based on data recorded between 1981 and 2010. The average annual maximum temperature

is 95.0 degrees Fahrenheit (°F) in June, and the average annual minimum temperature is 29.8°F in December and January (WRCC 2013).[2]

3.3. SURFACE WATER

There are no surface water features mapped within the Project Area according to the National Wetlands Inventory created by the USFWS (USFWS 2024).[3] The field survey confirmed there are no surface water features within the Project Area. There are tanks in the immediate vicinity (one on the eastern and one on the western boundary) that are mapped as palustrine ponds with unconsolidated bottoms that are seasonally flooded. Review of aerial imagery indicates that these tanks are ephemeral.

3.4. SOIL

Soils within the Project Area are mapped as having three predominant soil types including Forrest clay loam 1- to 3-percent slopes, Libby-Gulch complex 0- to 10-percent slopes, and Guest-Riverroad association 0- to 1-percent slopes (Soil Survey Staff 2024).[4] Four additional soil types in lower quantities within the Project Area are Riverroad and Ubik soils 0- to 5-percent slopes, Forrest silt loam 1- to 3-percent slopes, Pits, and Diaspar sandy loam 0- to 2-percent slopes (Soil Survey Staff 2024). In general, soils within the Project Area are well-drained and occur on flat terrain, basin floors, and fan terraces.

3.5. VEGETATION

The biotic community in the Project Area is broadly mapped as the Semidesert Grassland subdivision of Sonoran Desertscrub (The Nature Conservancy 2012). Portions of the site are dominated by dense shrubs while others were open with low growing vegetation (**Appendix C**). The vegetation identified within the Project Area includes spider grass (*Aristida ternipes*), net-leaf hackberry (*Celtis reticulata*), cholla (*Cylindropuntia* spp.), American tartwort (*Flourensia cernua*), vine mesquite (*Hopia obtusa*), honey mesquite (*Prosopis glandulosa*), tropical soapberry (*Sapindus saponaria*), gum bully (*Sideroxylon languinosum*), big sacaton (*Sporobolus wrightii*), soaptree yucca (*Yucca elata*), whitethorn acacia (*Vachellia constricta*), and rough cocklebur (*Xanthium strumarium*). Non-native grasses were also observed including Bermuda grass (Cynodon dactylon) and Johnsongrass (*Sorghum halepense*).

[2] Western Regional Climate Center accessed online January 17, 2024.

[3] National Wetlands Mapper accessed online January 17, 2024.

[4] Natural Resources Conservation Service (NRCS) Web Soil Survey accessed online January 17, 2024.

4. ENVIRONMENTAL PROTECTION MEASURES

Horus will implement a series of Environmental Protection Measures (EPMs) designed to: 1) avoid, 2) minimize, 3) restore and 4) offset Project impacts to wildlife and vegetation resources and to enhance habitat values. Project EMPs will be implemented according to these five categories:

1. Special Project Design Features (**Section 4.1.1**)
2. Habitat Enhancement/Wildlife Management (**Section 4.1.2**)
3. Protection of Species Covered under the Migratory Bird Treaty Act (**Section 4.1.3**)
4. Erosion Control and Vegetation Management (**Section 4.1.4**)
5. Fire Prevention (**Section 4.1.5**)

Project EPMs were developed under the following considerations:

- Cochise County zoning regulations (Site Development Standards) for Solar Energy Power Plants.
- Site selection that avoids effects to ESA, BGEPA and MBTA covered species and proposed/designated critical habitats, biodiversity hotspots, modeled wildlife connectivity corridors, and important bird areas.
- Evaluation of construction, operations, and maintenance phases of the Project for conservation opportunities. The construction phase will disturb and displace wildlife; however, once construction is complete, the only activities in the Project Area will be occasional equipment maintenance and vegetation management for continued wildlife habitat support.
- Specific species known to occur, or likely to occur in the Project Area.
- Mitigation measures previously recommended by USFWS, AGFD and other public agencies for other projects to avoid and/or minimize any impacts to species with potential to occur in the Project Area. This includes but is not limited to:
  - AGFD guidelines for solar developments (AGFD 2010a).
  - Wildlife-friendly fencing (AGFD 2009a); and
  - Wildlife-friendly development (AGFD 2009b).

Further input on EPMs may be incorporated as appropriate by direct coordination with the Arizona Game and Fish Department (AGFD) and USFWS beyond the standard online environmental review tools appended to this report (**Section 5**).

4.1.1. Special Project Design Features

The special design features of the Project will incorporate the following EPMs to avoid and minimize impacts to wildlife and habitat resources:

- Of the two types of solar energy technologies available, the Project proposes to use photovoltaic (PV) power which converts solar energy to electricity using semiconductor material. The other available technology, Concentration Solar Power (CSP), involves mirrors to concentrate the sun's energy to drive steam turbines and will not be used for the Project as it is known to have detrimental impacts to birds.

- To avoid disruption of wildlife behavior patterns and habitat use, lighting will be limited to only that which is needed for human safety. To avoid light pollution and its effect on wildlife, all lighting fixtures will be hooded, shielded, and directed down toward the interior of the Project site except where necessary for safety. To further minimize the impacts of lighting, Project facilities will utilize motion sensors at most fixtures.
- Solar racks will be installed at a low ground cover ratio (GCR) to limit the optical illusion of water. Racks will be no less than 12 feet clear distance, measured from the outer edge of panels between tracker rows to reduce the potential for impacts to avian species.
- PV panels to be used for the Project will employ anti-reflectivity coating, integral to the panel to avoid glare/potential impacts to wildlife.
- Financial assurances in the amount of estimated decommissioning costs will be in place prior to construction, as required by the Solar Energy Power Plant ordinance regarding clean removal and disposal/recycling of any damaged panels and a decommissioning plan.
- Dust palliative will be applied along Central Highway adjoining the Project Area prior to and during construction to ensure dust is mitigated.
- Water consumption for the Project is limited to the construction phase and periodic cleaning of the panels. Water will be sourced from an onsite water well.
- Prior to construction, contractors/crews will be required to participate in a worker environmental awareness training program to educate them on stormwater best management practices, invasive weed management to prevent the spread of noxious and invasive species during construction, and general wildlife avoidance and mitigation measures.

4.1.2. Habitat Enhancement/Wildlife Management

The following EPMs will be implemented to enhance wildlife in the Project Area:

- Wildlife-friendly fencing will be established around the Project pursuant to AGFD published guidelines/approval. Security fencing is required around the solar farm footprint for safety and security reasons, and potential disruption to terrestrial wildlife corridors will be mitigated through wildlife-friendly fencing designed to allow/exclude species endemic to the area. Most fencing is chain-link with exclusion fencing at the top to prevent ungulates from becoming trapped in the site and with appropriate gaps at the bottom of the fence to allow small vertebrate and meso-carnivore permeability. Horus will also consider the use of a three-stand wildlife fence around the perimeter with more robust fencing limited around the substation.
- A wildlife corridor will be preserved at the Project Area where native vegetation will remain in its current condition. This allows additional opportunities for wildlife to cross the Project Area while avoiding traffic along Central Highway and has the added value of providing an additional visual screening.

- Though it will not be necessary to mass grade the Project Area, trees and bushes will be removed in development areas while herbaceous plants will remain. Herbaceous plants will be mowed and treated to maintain vegetative perennial cover that not only reduces fugitive dust and erosion, but minimizes potential impacts to small mammals, raptors, mesocarnivores, lagomorphs and box turtles.
- If revegetation is required in temporary construction areas, the seed mix will include flowering annual and perennial flowers including local varieties of milkweed to help create suitable foraging habitat for monarch butterflies and bolster potential reproductive habitat (*Asclepias spp*.).

4.1.3. Protection Species Covered under the Migratory Bird Treaty Act

The following EPMs will be implemented to avoid take of birds protected under the MBTA:

- If construction were to occur between March 1 and August 31, a pre-construction nesting bird survey will be completed no more than 10 days prior to vegetation removal activities. Should active bird nests be located, a 50-ft avoidance buffer will be maintained until nests are no longer active.
- If nesting raptors are identified in the Project vicinity, the appropriate spatial buffer listed in the USFWS Guidelines for Raptor Protection from Human and Land Use Disturbances will be established to avoid disturbance (Romin and Muck 2002). Nest monitoring will occur to allow construction to proceed once birds have fledged.
- As stated above, maintenance of the vegetation at a solar farm is a necessary activity to ensure the arrays are not shaded or damaged. Mowing, masticating and herbicide treatments may be applied to maintain the site. To the extent practicable, mowing shall not occur during the MBTA breeding season. If construction occurs during the breeding season, a qualified biologist will perform a preconstruction survey to determine if nesting migratory birds are present. Note that mowing will be coordinated with spring and monsoonal growing seasons.
- The Project will follow Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) recommendations including adequate separation (spacing or covers) of energized equipment to prevent electrocutions from powerline conductors and substation equipment (APLIC 2006).

4.1.4. Erosion Control and Vegetation Management

The following EPMs will be incorporated to control erosion and sedimentation and to avoid adverse effects on surface water quality:

- Disturbed soil will be scarified to assist with vegetation establishment.
- Existing trees that require removal will be chipped and spread over disturbed land in the Project Area to enhance soil stabilization and reduce erosion.
- Areas of temporary disturbance for construction will be re-seeded with native herbaceous species with a focus on pollinator suitable plants.

- Construction equipment will be washed prior to entering the Project work site, and monitoring for noxious weeds will occur after Project completion.
- Removal of large trees will be avoided where practicable (along wildlife corridor and outside building areas).
- Notification will be provided to the Arizona Department of Agriculture to allow salvage of protected native plants on private lands, and Horus will coordinate with interested parties on salvage of specific plant materials as practicable.

4.1.5. Fire Prevention

Horus will take all practicable precautions to prevent wildland fires and will adhere to any fire restrictions imposed by local entities. Maintenance work will be avoided during fire season to the extent practicable.

- Horus will maintain their equipment line in accordance with the National Electric Safety Code (NESC) adopted by the State of Arizona that requires electric utilities to prune vegetation away from line/equipment (North American Electric Reliability Corporation 2021).
- New power poles will be configured from steel rather than wood.
- Work vehicles will not be parked in a manner that blocks access for emergency vehicles.
- Vehicles will not be parked atop tall growing vegetation.
- Each crew will have ready access to fire equipment, including a fire extinguisher and/or portable water pump and shovel.

5. METHODS

A screening analysis was completed to evaluate the potential for special-status species or their designated or proposed critical habitat to occur within the Project Area. A USFWS Information for Planning and Consultation (IPaC) online query (**Appendix A**) was performed to generate the list of ESA species to be evaluated for potential to occur within the Project Area and to determine the presence or absence of designated or proposed critical habitat within the site. In addition to species identified in the IPaC query. The screening analysis determinations were based on review of:

- The natural history and known geographical and elevational ranges of the species.
- Results of an AGFD Heritage Data Management System (HDMS) online environmental review tool query that provided records of special-status species within 5 miles of the Project Area (**Appendix B**).
- Other occurrence records in published or grey literature, including citizen science data.
- Data provided by the AGFD HabiMap online mapping system.
- Data provided by the USFWS Critical Habitat Portal online mapping tool.
- Field observations made during a site visit on January 15 and 16, 2024.

The criteria used to determine the potential of occurrence of special-status species included in this screening analysis are defined as follows:

Present: The species has been observed to occur within the Project Area, the Project Area is within the known range and distribution of the species, and habitat characteristics required by the species are present.

Possible: There are no known records of the species within the Project Area, but the known, current distribution of the species includes the Project Area and the required habitat characteristics of the species appear to be present in the Project Area. Given the uncertainty associated with species identification and accuracy of the location of observations from eBird and other citizen science databases, observations associated with citizen science databases are evidence that a species is possible within the Project Area.

Unlikely: The known, current distribution of the species does not include the Project Area, but the distribution of the species is close enough such that the Project Area may be within the dispersal or foraging distance of the species, and they may show up as transients. The habitat characteristics required by the species may be present in the Project Area.

None: The Project Area is outside of the known distribution of the species, or the habitat characteristics required by the species are not present.

5.1. TAKE ANALYSIS

A “take” analysis was conducted to evaluate the potential impacts to special-status species associated with Project activities (**Tables 1 and 2**). Impacts to species were assessed based on the appropriate regulatory and statutory designation (ESA and BGEPA) under which the species is covered. The purpose of the “take” analysis is to determine if take is likely to occur with implementation of the Project.

A take analysis for species listed under the ESA and BGEPA was conducted per the guidance for BGEPA and ESA consultation which included three potential take determinations:

- **No take**
- **Not likely to result in take**
- **Likely to result in take**

Further, guidance is provided in an April 6, 2018, memorandum (FWS/AES/067974) issued by the USFWS Principal Deputy at USFWS Headquarters to all USFWS Regional Directors, entitled *Guidance on Trigger for an Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act Where Occupied Habitat of Potentially Occupied Habitat is Being Modified*. The memorandum was issued to assist proponents of non-federal projects to determine if an Incidental Take Permit is recommended. The recommendation is based on the potential for take of a listed species. The memorandum asks several

questions regarding the potential for take, which in turn leads to a determination of whether an Incidental Take Permit is recommended. Note that WestLand's responses to these questions, based on the above analysis, are all "No." Also note that while "Yes" responses to questions can lead to a determination that the proponent will, in the words of the questionnaire, "likely need" an Incidental Take Permit, the memorandum explains to USFWS staff the vital importance of acknowledging that pursuing an Individual Take Permit is voluntary on the part of the project proponent and cannot be required by the USFWS: it is a risk assessment to be made by the project proponent.

Potential of the disturbance activities to result in "take" to ESA or BGEPA species, was evaluated by considering the results of the screening analysis alongside possible impacts from 1) surface disturbance, 2) noise, 3) dust, and 4) traffic.

5.1.1. Surface Disturbance

As outlined in **Section 2**, construction will include seasonal pre-construction surveys, as needed; treatment of unpaved access road (dust palliative); installation of trailer(s) and designated laydown and materials storage areas; fence installation; mowing and vegetation removal with minimal grading (cross-grading of the Project Area will be limited); installation of any necessary drainage and erosion controls; PV panel/tracker assembly; gen-tie line, substation, and other ancillary facilities.

These activities may remove actual or potential wildlife habitat and vegetation, although the field survey confirmed variation in vegetation density throughout the Project Area with large areas of existing vegetation where cover is sparse and isolated areas of more dense cover (**Appendix C, Photos 1 through 6**).

5.1.2. Noise

Noise levels from construction are anticipated to increase in areas surrounding these activities. However, increases in noise from these activities will be temporary in nature and will occur adjacent to roadways with regular traffic. Construction noise will be limited to daytime hours.

5.1.3. Dust

Fugitive dust may be generated during ground disturbing activities. Dust palliative will be applied to Central Highway abutting the Project Area prior to and during construction to ensure dust is mitigated. Dust is largely deposited closest to the source and deposition further attenuates with distance. For example, dust loads produced within an area decrease exponentially with distance, such that more than 70 percent of the total dust is deposited within 33 ft of the dust production area, and more than 90 percent within 98 ft (Walker and Everett 1987). Dust can affect the growth processes of vegetation and alter the structure of plant communities in an area (Farmer 1993). Ground around and under solar panels and in the Project Area buffer areas shall be maintained for the life of the Project in vegetated ground cover. Dust generation will only potentially occur during the short duration of the construction period.

5.1.4. Traffic

Localized traffic volume is anticipated to increase during construction but represents only a small increase to existing traffic conditions on Prince Road (**Appendix C, Photos 7 and 8**) and Central Highway (**Appendix C, Photo 9**). The increased traffic volume will occur primarily during daytime hours and along existing roads to access the site and will be limited to the construction period.

6. POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR AND TAKE ANALYSIS

6.1. ESA LISTED SPECIES

Nine ESA-covered species were identified for the Project Area in the IPaC query (**Appendix A**). ESA-covered species included jaguar (*Panthera onca*), northern aplomado falcon (*Falco femoralis septentrionalis*), yellow-billed cuckoo (*Coccyzus americanus*, western Distinct Population Segment), Chiricahua leopard frog (*Rana chiricahuensis*), Yaqui catfish (*Ictalurus pricei*), Yaqui chub (*Gila purpurea*), Arizona eryngo (*Eryngium sparganophyllum*) and Wright's marsh thistle (*Cirsium wrightii*). In addition to these eight ESA-listed species one candidate species, monarch butterfly (*Danaus plexippus*) was evaluated. While northern aplomado falcon is included on the IPaC list, it is considered an experimental population (EXPN) under section 10(j); therefore, it is treated as threatened under the ESA and is not subject to the take prohibitions of section 9. One species, monarch butterfly, was determined to have an **Unlikely** potential to occur, and the remaining eight ESA species were determined to have no potential to occur (i.e., **None**). Determinations and supporting citations for these findings are provided in **Table 1**.

6.2. BGEPA LISTED SPECIES

Of the two BGEPA listed species, golden eagle (*Aquila chrysaetos*) has a potential to occur of **Unlikely** and bald eagle (*Haliaeetus leucocephalus*) has the potential to occur of **None** within the Project Area. Determinations and explanations for these findings are provided in **Table 2**. No take is anticipated for BGEPA covered species.

Table 1. Federally Listed Special-Status Species Potential to Occur and Effects/Take Analysis

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in Arizona	Potential to Occur	Effects/Take Analysis
AMPHIBIANS						
Lithobates chiricahuensis Chiricahua leopard frog	Threatened (USFWS 2002, USFWS 2012); designated critical habitat (USFWS 2012).	Breeds in perennial to semi-permanent montane aquatic environments including cattle tanks, creeks, cienegas, pools, rivers, springs, lakes and reservoirs (USFWS 2011). Larvae are obligate on aquatic habitats whereas adults are primarily aquatic but also utilize terrestrial habitats (USFWS 2012). May disperse from occupied habitat one mile overland, three miles along intermittent drainages, and five miles along permanent water courses, or some combination thereof (USFWS 2012). Elevation: 3,200 to 8,890 ft (USFWS 2012).	Occurs in Arizona and New Mexico, U.S. and Sonora, Chihuahua and Durango, Mexico (USFWS 2012).	In Arizona, this species distribution is split into two areas, one within montane areas across the Mogollon Rim and the second in the mountains and valleys south of the Gila River (AGFD 2015). At the time of the initial listing (USFWS 2002), the frog was likely extant at an estimated 87 localities in Arizona. Surveys between 2002 and 2009 suggest that there has been a modest increase in the number of breeding sites (USFWS 2011).	**None.** Though there are HDMS occurrence records within 5 miles of the Project Area (**Appendix B**), the site lacks appropriate habitat of riparian woodlands (**Appendix C**), potential water features in the immediate vicinity are mapped as intermittent ponds, therefore, the site does not provide breeding habitat for this species.	**No Take.** This species is not expected to occur within the Project Area.
BIRDS						
Coccyzus americanus (western Distinct Population Segment) Yellow-billed cuckoo	Threatened (USFWS 2014c); designated critical habitat (USFWS 2021).	In Arizona, most commonly found in lowland riparian woodlands where Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk are dominant (USFWS 2013). Also utilizes drier woodlands including mesquite bosques, drainages in desert scrub and desert grassland with a tree component, and Madrean evergreen woodlands in perennial, intermittent or ephemeral drainages (USFWS 2020a). Cuckoos may migrate along riparian corridors and surrounding upland vegetation (Hughes 2020). Elevation: Typically below 6,600 ft (AGFD 2011b).	Species is a long-distance neotropical migrant (Hughes 2020). At the species level, breeds throughout temperate North America south to Mexico and the Greater Antilles (Hughes 2020). The western DPS breeds west of the Continental Divide and the watershed boundary between the Rio Grande and Pecos River and the Chihuahuan Desert. The USFWS considers the historical breeding range to include southern British Columbia, Canada and in Washington, Idaho, Nevada, Oregon, Utah, western Colorado, southwestern Wyoming, California, Arizona, western New Mexico, and Texas, U.S. Breeding range extends into the Cape Region of Baja California Sur, Sonora, Sinaloa, western Chihuahua and northwestern Durango, Mexico (USFWS 2014c). Winters in South America, east of the Andes and typically south of the Amazon Basin in southern Brazil, Paraguay, Uruguay, eastern Bolivia and northern Argentina (USFWS 2014c).	More common in southern, central and the extreme northeastern portion of state, but occurs throughout the state where suitable habitat exists (AGFD 2011b).	**None.** Though there are no HDMS occurrence records within 5 miles of the Project Area (**Appendix B**), the nearest eBird record is near Cochise College in Douglas located 6 miles south (eBird 2024, accessed January 17, 2024), and the site lacks appropriate habitat of riparian woodlands (**Appendix C**).	**No Take.** This species is not expected to occur within the Project Area.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in Arizona	Potential to Occur	Effects/Take Analysis
Falco femoralis septentrionalis Northern aplomado falcon	Endangered (USFWS 1986); no critical habitat; non-essential experimental population (USFWS 2006).	Within the U.S., this species uses coastal prairies, desert grasslands, oak woodlands and riparian gallery forest (Keddy-Hector, Pyle, and Pattern 2017). They have historically occurred in relatively flat and open habitats (USFWS 2014d). Builds nests in large trees, cliffs, utility poles, artificial platforms or on the ground when elevated nest sites are not available (Keddy-Hector, Pyle, and Pattern 2017). This species is expected to use similar habitat year-round (Keddy-Hector, Pyle, and Pattern 2017). Elevation: In southwestern U.S., most common from 3,300 to 4,900 ft (AGFD 2001).	This species is mostly non-migratory, although local nomadic movement may occur (Keddy-Hector, Pyle, and Pattern 2017). The *septentrionalis* subspecies occurs in New Mexico and Texas, U.S. and the Mexican states of Chihuahua, northwestern Chiapas, western Campeche, Oaxaca, San Luis Potosi, Tabasco, and Vera Cruz (USFWS 2014d).	Historically occurred in the southern portion of the state but there are no substantiated breeding records since 1940. The most recently documented sighting in the state occurred in 1977, however, there was an unconfirmed report in 2005 from near the international border with Mexico (USFWS 2006). A non-essential experimental population, encompassing the entire state, was established in 2006 but we are unaware of any introduction of birds into Arizona (USFWS 2006).	**None.** Though there are no HDMS occurrence records within 5 miles of the Project Area (**Appendix B**) and there are no eBird records in Arizona (eBird 2024, accessed January 17, 2024).	**No Take.** This species is not expected to occur within the Project Area.
FISH						
Gila purpurea Yaqui chub	Endangered (USFWS 1984); designated critical habitat (USFWS 1984).	Inhabits pools, springs, spring-fed ditches, creeks, and undercut banks in permanent streams, particularly where vegetative structure is adequate (USFWS 2018b). Currents in occupied aquatic systems are none to moderate. Species feeds on algae, invertebrates and detritus (USFWS 2018b). Elevation: 4,000 to 6,000 ft (USFWS n.d.-c, accessed January 18, 2024).	Occur in approximately 35 managed populations across the known range. Historically they are known to occur in southeastern Arizona and into Sonora Mexico (USFWS 2018b).	Historically known to occur throughout Rio Yaqui drainage in Cochise County including sections of San Bernardino Creek (Black Draw), Whitewater Creek Black Wash (Astin Wash), and Morse Canyon portion of the Willcox Playa (USFWS 2018b). Currently found as introduced populations in Leslie Canyon of the Swisshelm Mountains, artificial ponds at San Bernardino National Wildlife Refuge, and cattle tanks and pools in West Turkey Creek in the Chiricahua Mountains (USFWS 2018b, n.d.-c).	**None.** There are no HDMS occurrence records within 5 miles of the Project Area (**Appendix B**) and current and introduced populations are well outside of the site.	**No Take.** This species is not expected to occur within the Project Area.
Ictalurus pricei Yaqui catfish	Threatened (USFWS 1984); designated critical habitat (USFWS 1984).	Utilize moderate to large streams in areas of medium to slow current with a sandy or rocky substrate (USFWS 1984). Elevation: 4,000 to 5,000 ft (USFWS n.d.-b, accessed January 18, 2024).	Historically occurred in the Rio Yaqui drainage in Sonora Mexico, including San Bernardino Creek, Black Draw tributary, in Cochise County, Arizona (USFWS n.d.-b, accessed January 18, 2024). Was considered extirpated in the United States in 1997 (USFWS n.d.-b, accessed January 18, 2024).	Reintroduced populations are found in San Bernardino National Wildlife Refuge and West Turkey Creek of the Chiricahua Mountains in Cochise County, Arizona (USFWS n.d.-b, accessed January 18, 2024).	**None.** There are no HDMS occurrence records within 5 miles of the Project Area (**Appendix B**) and current and reintroduced populations are well outside of the site.	**No Take.** This species is not expected to occur within the Project Area.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in Arizona	Potential to Occur	Effects/Take Analysis
INSECTS						
Danaus plexippus plexippus Monarch butterfly	Positive 90-day finding (USFWS 2014a).	Caterpillars feed exclusively on plants in the subfamily *Asclepiadoideae* (milkweed) and adults forage for nectar on a wide variety of flowers. This species can be found wherever milkweed occurs. Overwintering populations use the leaves, branches, and trunks of large trees within forested groves. In California, both native tree species and eucalyptus trees are utilized (Jepsen et al. 2015). Elevation: In Arizona, found at all elevations (Morris, Kline, and Morris 2015).	*D. plexippus* occurs in North America, Central America, the Caribbean south to South America, Hawaii, Australia, some Pacific Islands, parts of Asia, Africa, and southern Europe. Populations outside of the Americas may be non-native (Zhan et al. 2014). Most populations of the *plexippus* subspecies are migratory and breed in southern-most portions of all Canadian provinces except Newfoundland and Labrador, the conterminous U.S. states and the Mexican states of Baja California, Chihuahua, Coahuila, Nuevo Léon, Sonora, and Tamaulipas. The wintering range of migratory populations includes coastal California and southern Florida, U.S. and the Mexican states of Baja California, Mexico and Michoacán (Jepsen et al. 2015).	Breeding and migratory populations occur throughout the state. Some adults overwinter in the low deserts in areas where food resources are abundant. These areas are generally represented by urban environments including Yuma, Phoenix and Tucson (Morris, Kline, and Morris 2015).	**Unlikely.** While there are HDMS occurrence records within 5 miles (**Appendix B**), the nearest documented observation of monarch is southeast of Douglas in 1996 located approximately 13 miles southeast (The Xerces Society for Invertebrate Conservation 2024, accessed January 18, 2024), no milkweed were observed during field investigations, and the site lacks appropriate breeding habitat of milkweed (**Appendix C**). However, vegetation in the site may be suitable for foraging in the form of flowering plants.	**No Take.** While this species may forage within the Project Area no suitable breeding habitat occurs. Therefore, no take is anticipated.
MAMMALS						
Panthera onca Jaguar	Endangered (USFWS 1997); designated critical habitat (USFWS 2014b).	Range-wide this species uses wide variety of habitat types including lowland wet vegetative communities, including marshy savanna and tropical rainforest. This species is also found in arid regions where it is found in tropical dry forest, thornscrub, desertscrub, chaparral, semidesert grassland, Madrean evergreen woodland, deciduous forest, and conifer forest (USFWS 2018a). Elevation: Has been recorded from as high as 9,186 ft in the northern extent of its range (USFWS 2018a).	Occurs in southern Arizona, southern New Mexico and southern Texas, U.S. Range extends southward through Mexico to northern Argentina (USFWS 2018a).	Historically (i.e., prior to 1965), jaguars were reported at numerous locations in Arizona, as far north as the Grand Canyon; however, all Arizona records since 1965 have been in the southern portion of the state (Brown and López-González 2001, Wildlife Conservation Society 2021, accessed February 1, 2021). One record is from near Globe, and the remaining records are from the Atascosa, Baboquivari, Dos Cabezas, Huachuca, Patagonia, Peloncillo, Santa Rita and Whetstone mountains in the southeastern portion of the state. Between 1965 and 1986, only three jaguars were documented (and all were killed) in Arizona: in the Patagonia Mountains (1965), near the Santa Cruz River (1971), and in the Dos Cabeza Mountains (1986). No jaguars were reported in Arizona for 10 years between 1986 and 1996, but the number of sightings of this species in the southwestern U.S. has been on the rise since 1996. Seven possibly eight, individual jaguars were documented in the U.S. between 1996 and 2021: two in New Mexico and five or six in Arizona (Wildlife Conservation Society 2021). A single male jaguar has been documented in the Dos Cabeza and Chiricahua Mountains as recently as 2021 (Wildlife Conservation Society 2021). A recent sighting of a male jaguar occurred in the Huachuca Mountains on December 20 of 2023 (Associated Press 2024, accessed January 18, 2024). Because female jaguars have not been documented in the state for many years, individuals detected in Arizona are interpreted as part of a population that primarily occurs in adjoining regions of Mexico (USFWS 2018a).	**None**. There are no HDMS occurrence records within 5 miles (**Appendix B**) and confirmed sightings in Arizona occur along mountain ranges. The Project Area is located along a broad and sparsely vegetated valley bottom. The nearest mountain ranges are the Mule Mountains located 10 miles west and the Chiricahua Mountains 30 miles east. Additionally, jaguar sightings in Arizona are rare and isolated, therefore, they are not expected to occur in the Project Area.	**No Take.** This species is not expected to occur within the Project Area.

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in Arizona	Potential to Occur	Effects/Take Analysis
PLANTS						
Eryngium sparganophyllum Arizona eryngo	Endangered (USFWS 2022); designated critical habitat (USFWS 2022).	Inhabits organic muck or wet silty clay-loam soils in riparian zones or marshes in Pinyon-Juniper or Madrean evergreen woodlands and cienegas in desertscrub (AGFD 2004). Designated critical habitat (13 acres) occurs in Lewis Spring, Cochise County and La Cebadilla, Pima County, Arizona. Elevation: In Arizona, 2,720 to 4,000 ft (AGFD 2004).	Historically known to occur in six sites including three in Arizona, one in New Mexico, and one in Sonora, Mexico (USFWS 2022). Extirpated from Agua Caliente, Arizona, and Las Playas, New Mexico. Extant at four sites including La Cebadilla, Pima County, Arizona, Lewis Spring, Cochise County, Arizona, Rancho Aqua Caliente, Sonora, Mexico, and Ojo Vareleño, Chihuahua, Mexico.	Known from along Agua Caliente wash, La Cebadilla wetland complex and west of Tanque Verde wash near Tucson and from Lewis Springs Cienega in San Pedro Riparian National Conservation Area (AGFD 2004). The 2018 petition for listing (Center for Biological Diversity 2018) cites a report from SWCA (SWCA Environmental Consultants 2002) which did not detect the species during surveys of Pima county property as evidence that the Aqua Caliente population has been extirpated.	**None.** The Project Area is outside the known geographic range and there are no HDMS occurrence records within 5 miles (**Appendix B**) and lacks appropriate habitat of riparian areas. The nearest SEINet record is at Lewis Spring near Sierra Vista (SEINet 2024, accessed January 17, 2024) which is located approximately 35 miles northwest of the site.	**No Take.** This species is not expected to occur within the Project Area.
Cirsium wrightii Wright's marsh thistle	Threatened (USFWS 2020b); designated critical habitat (USFWS 2020b)	This plant is a wetland obligate that grows in saturated, often alkaline soils along streams, springs, seeps and marshes (Keil 2006, Lichvar et al. 2016, USFWS 2010). Elevation: 3,450 to 7,850 ft (USFWS 2010).	Historically found in Arizona, New Mexico, and Texas U.S. and Chihuahua and possibly Sonora, Mexico (USFWS 2010). The only confirmed extant population in the U.S. are in Chaves, Eddy, Otero, and Socorro counties of New Mexico (USFWS n.d.-a, accessed January 18, 2024).	This species has been extirpated from all known locations in Arizona (USFWS 2010). Historically, occurred in the San Bernardino Cienega, Cochise County (AGFD 2010b).	**None**. The Project Area is outside the known geographic range, there are no HDMS occurrence records within 5 miles (**Appendix B**), and the site lacks appropriate wetland habitat.	**No Take.** This species is not expected to occur within the Project Area.

Table 2. Bald and Golden Eagle Act Protected Species Potential to Occur and Take Analysis

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in Arizona	Potential to Occur	Take Determination
Aquila chrysaetos Golden eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).	Range-wide, breeds in a wide variety of open habitats, with nests typically on cliffs, and avoids heavily forested areas (Katzner et al. 2020). In Arizona, prefers pinyon-juniper woodlands and Sonoran desertscrub (Driscoll 2005). Constructs large nests on cliff ledges, rock outcrops, tall trees or, rarely, transmission towers (Driscoll 2005). They are known to forage within 4.4 miles of their nest (Tesky 1994), generally in open habitats where prey is available (Katzner et al. 2020). Primarily feeds on small mammals (greater than 80% of prey items) but also consumes birds, reptiles and fish (Katzner et al. 2020). In the western U.S. average territory size ranges from 22 to 55 square miles (AGFD 2002). Elevation: In Arizona, typically breeds between 1,300 to 9,000 ft (Driscoll 2005).	This species is a short to medium-distance partial migrant with a Holarctic distribution (Katzner et al. 2020). In North America, primarily breeds in western portion of the continent from Alaska to central Mexico. Northern most populations are typically migratory. Year-round and non-breeding populations occur from central Saskatchewan to British Columbia, Canada and south throughout its range and sparsely in the eastern U.S. (Katzner et al. 2020).	Found in suitable habitat throughout the state (Driscoll 2005) but tend to vacate low desert areas during the summer (AGFD 2002).	**Unlikely.** There are no HDMS occurrence records within 5 miles (**Appendix B**), however, there are eBird records in proximity to the Project Area including along Central Highway (records ranging between 1987 and 2000) approximately 9 miles south, along Double Adobe Road 3 miles east (2011), and 2.5 miles northwest (1989). There is no nesting habitat of cliffs, and the nearest potentially suitable nesting sites are likely to occur along the Mule Mountains 9 miles east or along the Chiricahua Mountains 30 miles west. The Project Area may provide suitable foraging habitat but does not provide nesting habitat.	**No Take.** Occurrence within the Project Area would be rare and short in duration, and there would be no alteration to suitable breeding habitat.
Haliaeetus leucocephalus Bald eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).	Breeding is concentrated in coastal areas, along rivers, lakes, or reservoirs. Typically breeds in forested areas with edge habitat within 1.3 miles of aquatic habitats suitable for foraging. Prefers areas of shallow water and shorelines for fishing and hunting a wide variety of waterfowl, and small aquatic and terrestrial mammals. Fish are preferred prey, but carrion is used extensively whenever encountered. Nests away from human disturbance in large trees and rarely on cliff ledges or on the ground when trees are absent. Winters primarily in coastal areas or along major river systems with adequate prey availability and large trees for perching (Buehler 2020). Elevation: In Arizona, 460 to 7,930 ft (AGFD 2011a).	Migratory behavior varies among populations and age groups (Buehler 2020). Breeds south of the tundra throughout Canada and the U.S., excluding Hawaii. Additionally, small breeding populations occur in Baja California, Sonora and Chihuahua, Mexico (Buehler 2020). Winter range appears to be expanding as populations increase in size. Most populations are year-round residents with only the northern most populations in Alaska, U.S. and Canada withdrawing southward or to coastal areas (Fink et al. 2018).	A small resident population occupies the central part of the state, and a wintering population occurs in central and northern Arizona. Breeding territories occur at most large lakes and reservoirs and along portions of large rivers and creeks, including the Agua Fria, Bill Williams, Colorado, Little Colorado, Gila, Salt, San Carlos, San Francisco, and Verde rivers (AGFD 2011a, McCarty, Licence, and Jacobsen 2018).	**None.** There are no HDMS occurrence records within 5 miles (**Appendix B**) of the Project Area, however, there are eBird records with the nearest observations reported approximately 5 miles north (Feb 2007) and 7 miles north near Whitewater Draw Wildlife Area (January and February 2023). There are no suitable breeding or foraging habitats of rivers, lakes, or reservoirs in the Project Area or its vicinity.	**No Take.** This species is not expected to occur within the Project Area.

7. REFERENCES CITED

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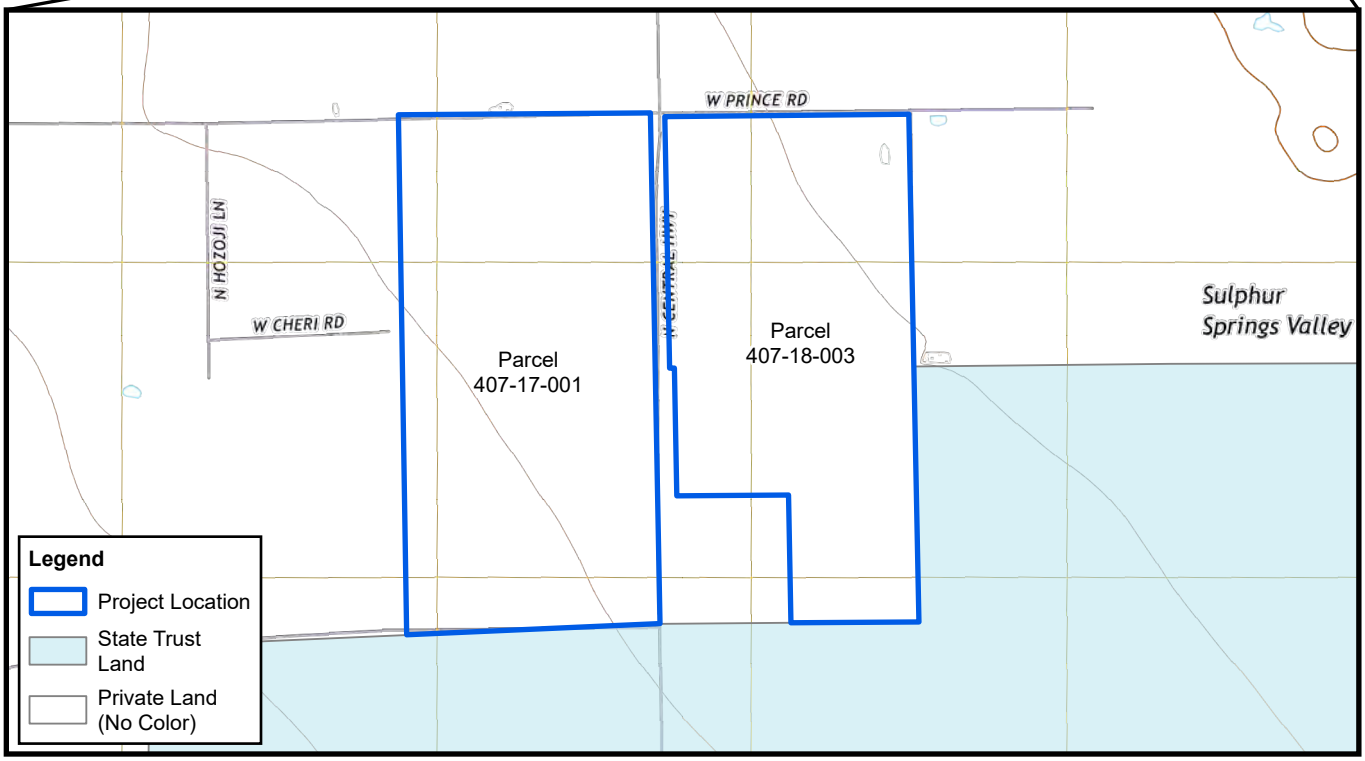
FIGURES

ARIZONA

PROJECT VICINITY

Approximate Scale 1 inch equals 12 miles



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Double Adobe USGS 7.5' Quadrangle (2021)
Projection: NAD 1983 UTM Zone 12N
Surface Management: Cochise County
Image Source: ArcGIS Online, World Topographic Map

HORUS ENERGY
Dahlia Solar
Biological Evaluation of
Parcels 407-17-001 and 407-18-003

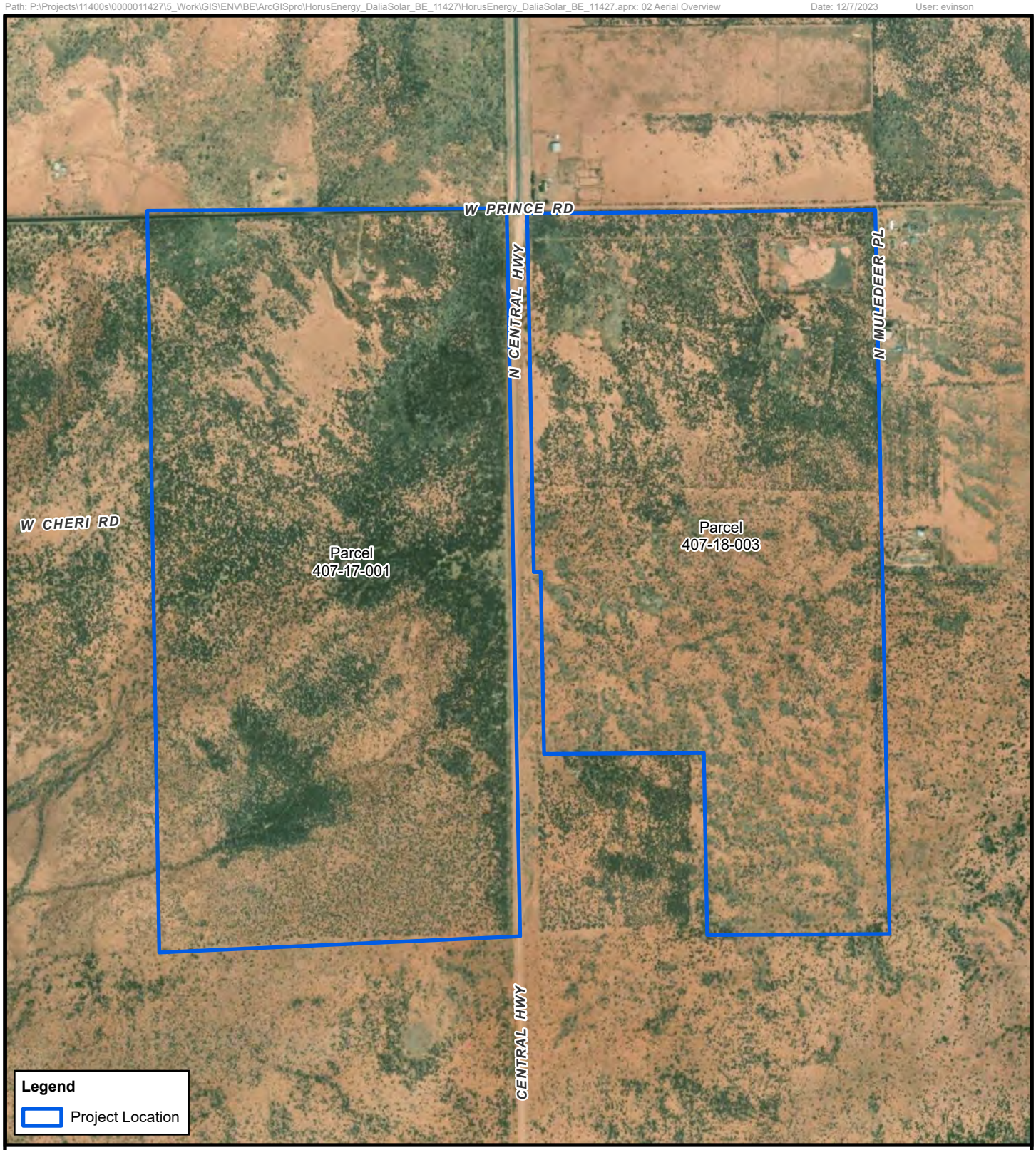
VICINITY MAP
Figure 1

WestLand Engineering & Environmental Services

N

0 1,000 2,000 Feet

0 300 600 Meters



T23S, R26E, Portions of Sections 9 and 10,
Cochise County, Arizona
Projection: NAD 1983 UTM Zone 12N
Image Source: Maxar 03/19/2022

N

0 500 1,000 Feet

0 150 300 Meters

WestLand Engineering & Environmental Services

HORUS ENERGY
Dahlia Solar
Biological Evaluation of
Parcels 407-17-001 and 407-18-003

AERIAL OVERVIEW
Figure 2

APPENDIX A
USFWS IPaC Online Query Report

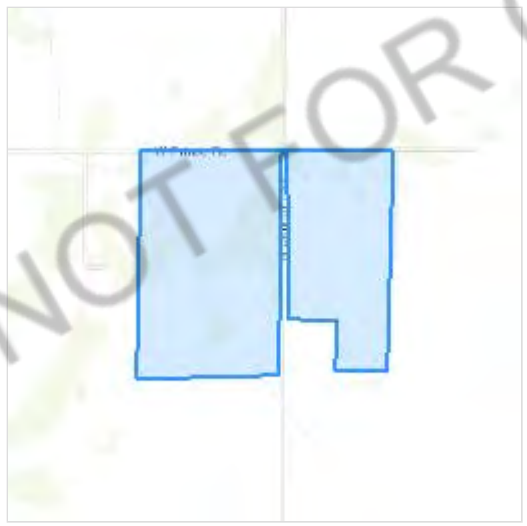
IPaC resource list

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

Birds

NAME	STATUS
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

Fishes

NAME	STATUS

NAME	STATUS
Yaqui Catfish Ictalurus pricei Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5432	Threatened
Yaqui Chub Gila purpurea Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3414	Endangered

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. Your location does not overlap the critical habitat. 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[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management 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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

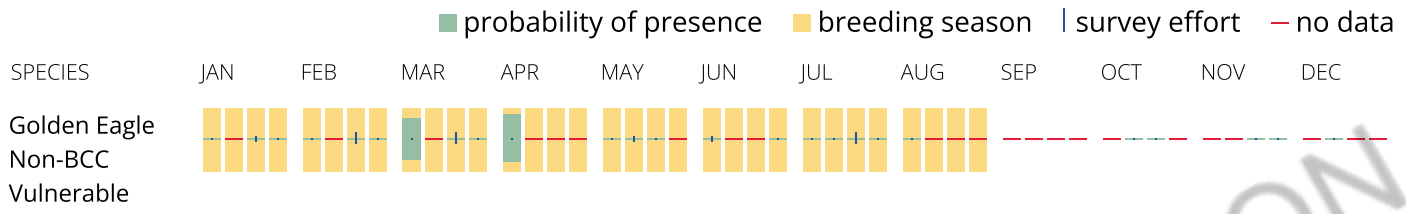
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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:

- Eagle Management 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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

Bendire's Thrasher Toxostoma bendirei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9435	Breeds Mar 15 to Jul 31
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
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

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "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.

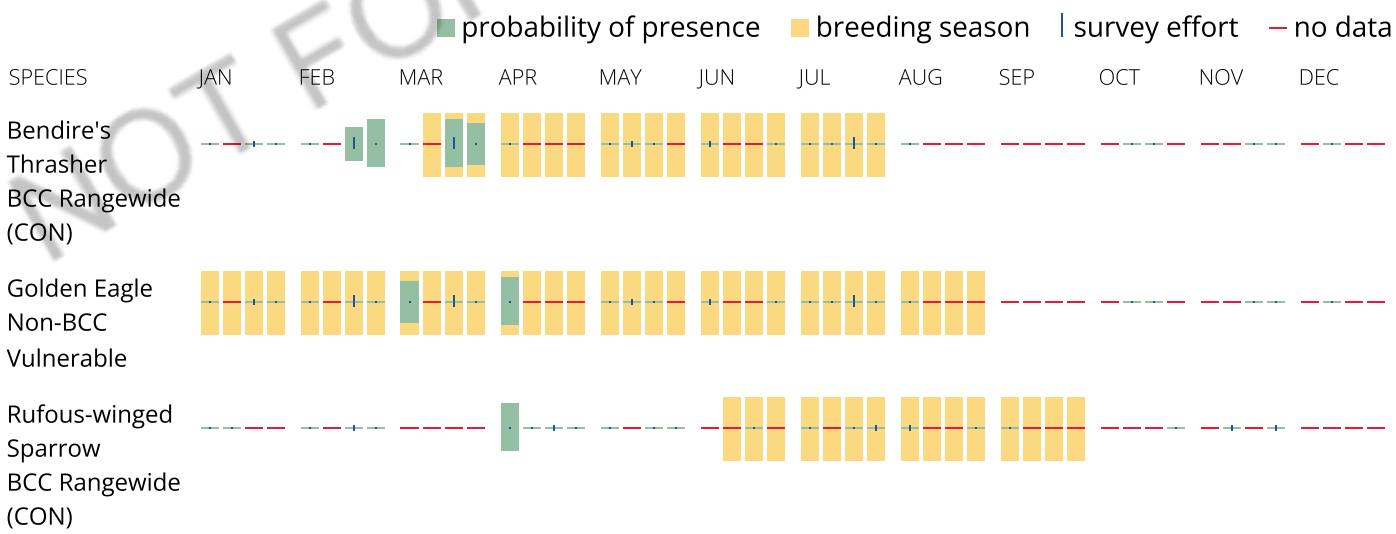
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.

This location did not intersect any wetlands mapped by NWI.

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.

APPENDIX B
AGFD HDMS Online Query Report

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:
Dahlia Solar

Project Description:
Proposed solar

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

Contact Person:
Gabrielle Diamond

Organization:
Private Consulting Firm

On Behalf Of:
CONSULTING

Project ID:
HGIS-21102

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.

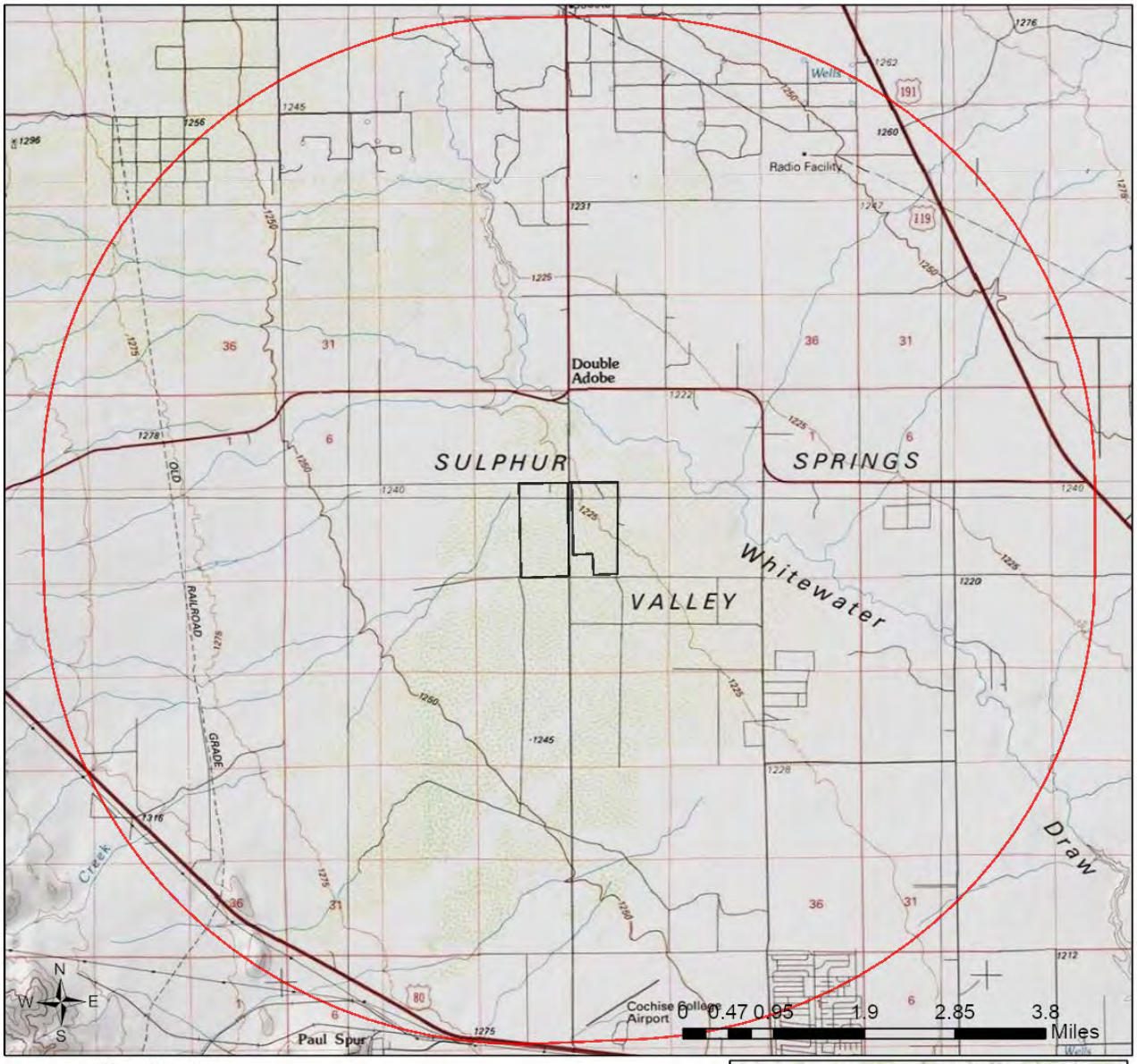
Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

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

Dahlia Solar

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 597.34

Lat/Long (DD): 31.4454 / -109.6986

County(s): Cochise

AGFD Region(s): Tucson

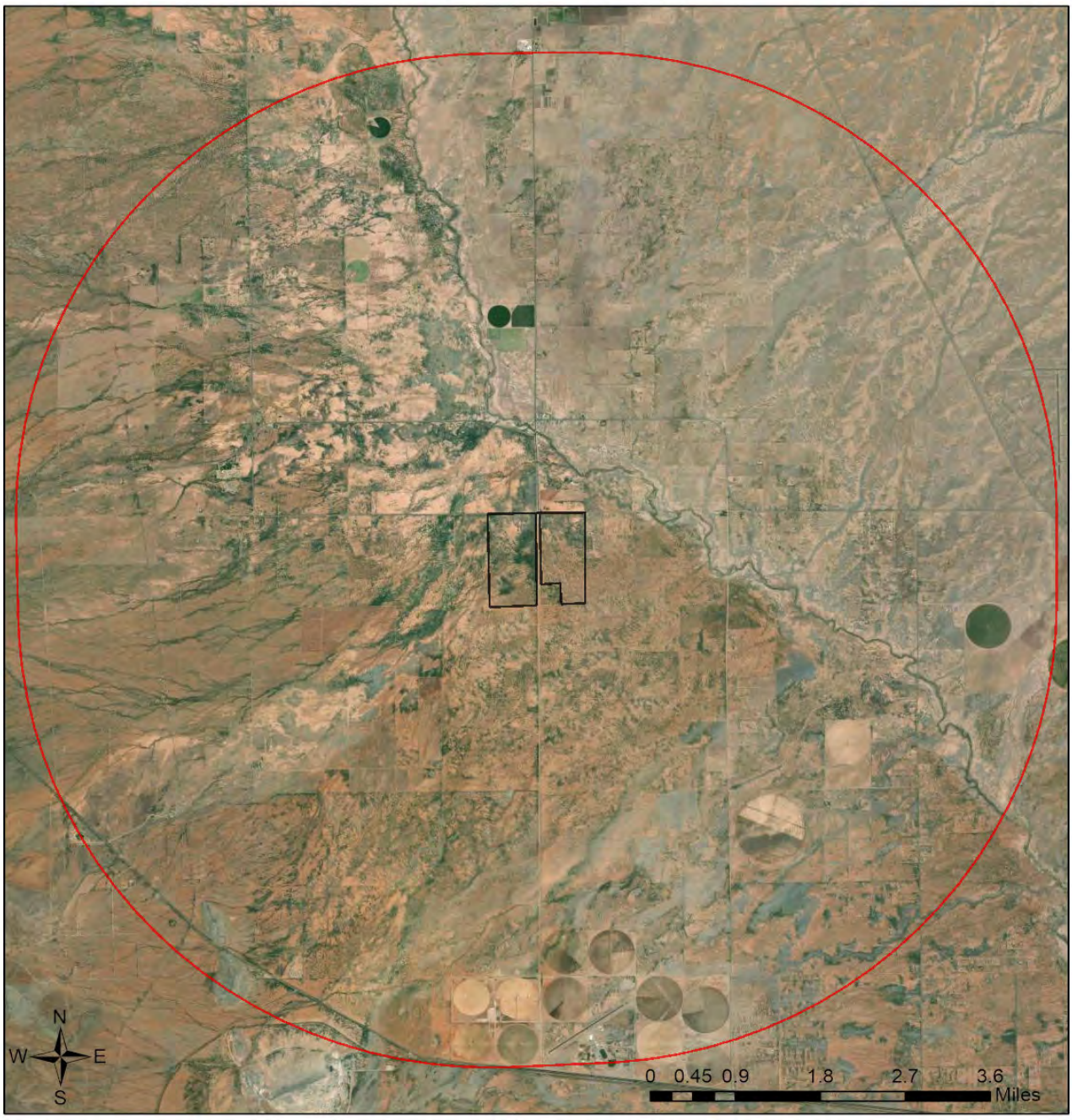
Township/Range(s): T23S, R26E

USGS Quad(s): DOUBLE ADOBE

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

Dahlia Solar

Web Map As Submitted By User



Critical Habitat
Buffered Project Boundary
Project Boundary

Project Size (acres): 597.34
Lat/Long (DD): 31.4454 / -109.6986
County(s): Cochise
AGFD Region(s): Tucson
Township/Range(s): T23S, R26E
USGS Quad(s): DOUBLE ADOBE

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Dahlia Solar

Important Areas

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

Project Size (acres): 597.34

Lat/Long (DD): 31.4454 / -109.6986

County(s): Cochise

AGFD Region(s): Tucson

Township/Range(s): T23S, R26E

USGS Quad(s): DOUBLE ADOBE

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, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Dahlia Solar

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): 597.34

Lat/Long (DD): 31.4454 / -109.6986

County(s): Cochise

AGFD Region(s): Tucson

Township/Range(s): T23S, R26E

USGS Quad(s): DOUBLE ADOBE

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, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Auriparus flaviceps	Verdin					2
Callipepla squamata	Scaled Quail					2
Cyprinella formosa	Beautiful Shiner	LT				1
Danaus plexippus	Monarch	C		S		
Gila purpurea	Yaqui Chub	LE				1
Heloderma suspectum	Gila Monster					1
Hypsiglena sp. nov.	Hooded Nightsnake					2
Incilius alvarius	Sonoran Desert Toad					2
Lanius ludovicianus	Loggerhead Shrike	SC				2
Peucaea botterii arizonae	Arizona Botteri's Sparrow			S		2
Phrynosoma cornutum	Texas Horned Lizard	SC				
Rana chiricahuensis	Chiricahua Leopard Frog	LT				1
Rana chiricahuensis	Chiricahua Leopard Frog	LT		S		1
Sistrurus tergeminus edwardsii	Desert Massasauga			S		
Spizella breweri	Brewer's Sparrow					2
Terrapene ornata luteola	Desert Box Turtle			S		
Terrapene ornata luteola	Desert Box Turtle			S		1
Toxostoma bendirei	Bendire's Thrasher					2

Note: Status code definitions can be found at https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/.

No Special Areas Detected
No special areas were detected within the project vicinity.

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
Ammodramus savannarum ammolegus	Arizona grasshopper sparrow					
Ammodramus savannarum perpallidus	Western Grasshopper Sparrow					
Anthus spragueii	Sprague's Pipit	SC				2
Aquila chrysaetos	Golden Eagle			S		2
Artemisiospiza nevadensis	Sagebrush Sparrow					
Asio otus	Long-eared Owl					2
Aspidoscelis sonorae	Sonoran Spotted Whiptail					2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Auriparus flaviceps	Verdin					2
Botaurus lentiginosus	American Bittern					2
Buteo regalis	Ferruginous Hawk	SC		S		2

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
Buteo swainsoni	Swainson's Hawk					2
Buteogallus anthracinus	Common Black Hawk					2
Calcarius ornatus	Chestnut-collared Longspur					2
Callipepla squamata	Scaled Quail					2
Calypte costae	Costa's Hummingbird					2
Camptostoma imberbe	Northern Beardless-Tyrannulet		S			2
Campylorhynchus brunneicapillus	Cactus Wren					2
Catharus ustulatus	Swainson's Thrush					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Choeronycteris mexicana	Mexican Long-tongued Bat	SC	S	S		2
Chordeiles minor	Common Nighthawk					2
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)					
Columbina inca	Inca Dove					2
Corvus cryptoleucus	Chihuahuan Raven					2
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1
Cynanthus latirostris	Broad-billed Hummingbird		S			2
Cynomys ludovicianus	Black-tailed Prairie Dog	CCA		S		1
Elgaria kingii	Madrean Alligator Lizard					2
Empidonax wrightii	Gray Flycatcher					2
Eumops perotis californicus	Greater Western Bonneted Bat					
Falco mexicanus	Prairie Falcon					2
Falco peregrinus anatum	American Peregrine Falcon					
Falco sparverius	American Kestrel					2
Haemorhous cassinii	Cassin's Finch					2
Heloderma suspectum	Gila Monster					1
Hypsiglena sp. nov.	Hooded Nightsnake					2
Icterus bullockii	Bullock's Oriole					2
Incilius alvarius	Sonoran Desert Toad					2
Kinosternon flavescens	Yellow Mud Turtle					2
Lanius ludovicianus	Loggerhead Shrike	SC				2
Lasiurus blossevillii	Western Red Bat		S			2
Lasiurus cinereus	Hoary Bat					2
Lasiurus xanthinus	Western Yellow Bat		S			2
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1
Lithobates blairi	Plains Leopard Frog			S		1
Lithobates chiricahuensis	Chiricahua Leopard Frog	LT				1
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1
Megascops kennicottii	Western Screech-owl					
Melanerpes uropygialis	Gila Woodpecker					2

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
Melospiza lincolnii	Lincoln's Sparrow					2
Melozone aberti	Abert's Towhee		S			2
Micrathene whitneyi	Elf Owl					
Myotis auriculus	Southwestern Myotis					2
Myotis thysanodes	Fringed Myotis	SC				2
Myotis velifer	Cave Myotis	SC		S		2
Myotis yumanensis	Yuma Myotis	SC				2
Notiosorex cockrumi	Cockrum's Desert Shrew					2
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					2
Nyctinomops macrotis	Big Free-tailed Bat	SC				2
Parabuteo unicinctus	Harris's Hawk					2
Passerculus sandwichensis	Savannah Sparrow					2
Peucaea botterii arizonae	Arizona Botteri's Sparrow			S		2
Peucaea carpalis	Rufous-winged Sparrow					2
Phrynosoma solare	Regal Horned Lizard					2
Pooecetes gramineus	Vesper Sparrow					2
Senticolis triaspis	Green Ratsnake		S			2
Spizella breweri	Brewer's Sparrow					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					
Terrapene ornata	Ornate Box Turtle			S		1
Toxostoma bendirei	Bendire's Thrasher					2
Tyrannus crassirostris	Thick-billed Kingbird		S			2

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-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/.

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 **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

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:

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APPENDIX C
Representative Photographs

Photo 1.

View of northwest portion of Project Area.

Photo 2.

View of southwest portion of Project Area.

Photo 3.

View of abandoned earthen tank at center of Project Area.

Photo 4.

View of a typical drainage within the Project Area.

Photo 5.

View of northwest portion of the Project Area.

Photo 6.

View of the southeast portion of the Project Area.

Photo 7.

View of the paved portion of Prince Road along the northwestern boundary of the Project Area.

Photo 8.

View of the non-paved portion of Prince Road along the northeastern boundary of the Project Area.

Photo 9.

View of Central Highway that bisects the Project Area.