Environmental Assessment – Golden Eagle

Department of Energy Loan Programs Office – Title XVII Program

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List of Acronyms and Abbreviations

Term	Definition
ABCWUA	Albuquerque–Bernalillo County Water Utility Authority
Applicant	Maxeon Americas, Inc.
AWN	acid-waste neutralization
AWTP	Advanced Water Treatment Plant
CAB	Central Administrative Building
Cell Fab	solar cell–manufacturing factory
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
City	City of Albuquerque
CO	carbon monoxide
CO_2	carbon dioxide
CUB	Central Utility Building
dB	decibel
DOE	Department of Energy
DOT	Department of Transportation
EA	Environmental Assessment
EJ	Environmental Justice
EPAct	Energy Policy Act of 2005
EPCRA	Emergency Planning and Community Right-to-Know Act
FWTP	Fluoride Waste Treatment Plant
GHG	greenhouse gas
gpm	gallons per minute
GW	gigawatt
HAP	hazardous air pollutant
I-	Interstate
IBC	International Building Code
kg	kilograms
LPO	Loan Programs Office
Maxeon	Maxeon Americas, Inc.
mg/l	milligrams per liter
MGD	million gallons of water a day
MODCO	Module Company
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NATA	National-Scale Air Toxics Assessment
NEPA	National Environmental Policy Act

Term	Definition
NH_3	ammonia
NMAC	New Mexico Administrative Code
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environmental Department
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OSHA	U.S. Department of Labor, Occupational Safety and Health Administration
PEL	permissible exposure limit
PIPP	Pollution Incident Prevention Plan
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
Project	Golden Eagle Project in Albuquerque, New Mexico
PV	photovoltaic
S&EC	Sedimentation and Erosion Control
SHPO	State Historic Preservation Officer
SiH_4	silane or silicon hydride
SO_2	sulfur dioxide
SPCC	Spill Prevention Control and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
TLV	Threshold Limit Value
TOPCon	Tunnel Oxide Passivated Contact
USC	Utility Support Courtyard
USFWS	U.S. Fish and Wildlife Service

1. PURPOSE AND NEED

1.1 Introduction

Title XVII of the Energy Policy Act of 2005 (EPAct) established a federal guarantee program for certain projects that employ innovative technologies. EPAct authorizes the Secretary of Energy to make loan guarantees available for those projects. Specifically, Title XVII identifies the projects as those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases (GHGs); and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued."

Maxeon Americas, Inc. (Maxeon or the Applicant) has applied for a loan guarantee pursuant to the U.S. Department of Energy's (DOE) Title 17 Clean Energy Financing Program, authorized by EPAct, for its Golden Eagle Project in Albuquerque, New Mexico (Project). The primary goal of the Renewable and Efficient Energy Projects program is to finance projects and facilities in the United States that employ innovative and renewable or efficient energy technologies that avoid, reduce, or sequester anthropogenic emission of GHGs.

1.2 Purpose and Need for Agency Action

The purpose and need for agency action are to comply with DOE's mandate under EPAct by selecting eligible projects that meet the goals of the act. The DOE Loan Programs Office (LPO) has determined that the Golden Eagle Project, as proposed by the Applicant, is eligible pursuant to EPAct Section 1703, and that it complies with DOE's mandate as defined in the Act. DOE is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan guarantee to the Applicant to support the Project.

The Applicant is proposing to construct and operate a new solar photovoltaic (PV) cell fabrication and panel assembly facility (i.e., the Project) on a 125-acre site along University Boulevard (street address not yet assigned) in Albuquerque, New Mexico (**Figure 1**). The Project site is within the Mesa del Sol community, a mixed land use development consisting of residential neighborhoods, parks, open spaces, Netflix Studios, a county recreational complex, the Isleta Amphitheater, and supporting commercial businesses (**Figure 2**). Maxeon plans to manufacture 3.7 gigawatts (GWs) of PV cells and 3.5 GW of modules in the proposed facility every year, which corresponds to approximately 5.8 million solar panels annually. Maxeon's objective is to supplement their two existing factories in Mexico that supply products for the U.S. market, which are already at full production capacity.

Maxeon estimates[1] that its full 3.5 GW production capacity would displace 2 million metric tonnes of carbon dioxide (CO_2) in the first year after fielding the PV, and 45 million tonnes of CO_2 would be displaced over the 25-year warranty period of the panels.

[1] Annual avoided direct CO_2 estimate of 0.924 mil tonnes per GW PV deployment from IEA (https://www.iea.org/data-and-statistics/charts/annual-direct-co2-emissions-avoided-per-1-gw-of-installed-capacity-by-technology-and-displaced-fuel). These estimates use the egrid National Average of 852 lbCO2/MWh as of June 5, 2023 (https://www.epa.gov/egrid/power-profiler#/).

Figure 1: Site Location

Source: Maxeon 2023.

1.3 Background

EPAct established a federal loan guarantee program for eligible energy projects that employ innovative technologies. DOE believes that commercial use of these technologies would help sustain and promote economic growth, produce a more stable and secure energy supply and economy for the United States, and improve the environment. DOE published a Final Rule that established the policies, procedures, and requirements for the loan guarantee program (10 Code of Federal Regulations [CFR] Part 609). The Title 17 Program is administered by LPO, which originates, underwrites, and services loans and loan guarantees to eligible applicants for projects that accelerate the commercial deployment of innovative energy technology.

To fund the construction and initial operation of the Golden Eagle Project, Maxeon applied to LPO for financial assistance. LPO has reviewed and determined that the application meets the goals of EPAct, and the Applicant has accepted and entered into LPO's due diligence process.

1.4 Scope of Environmental Assessment

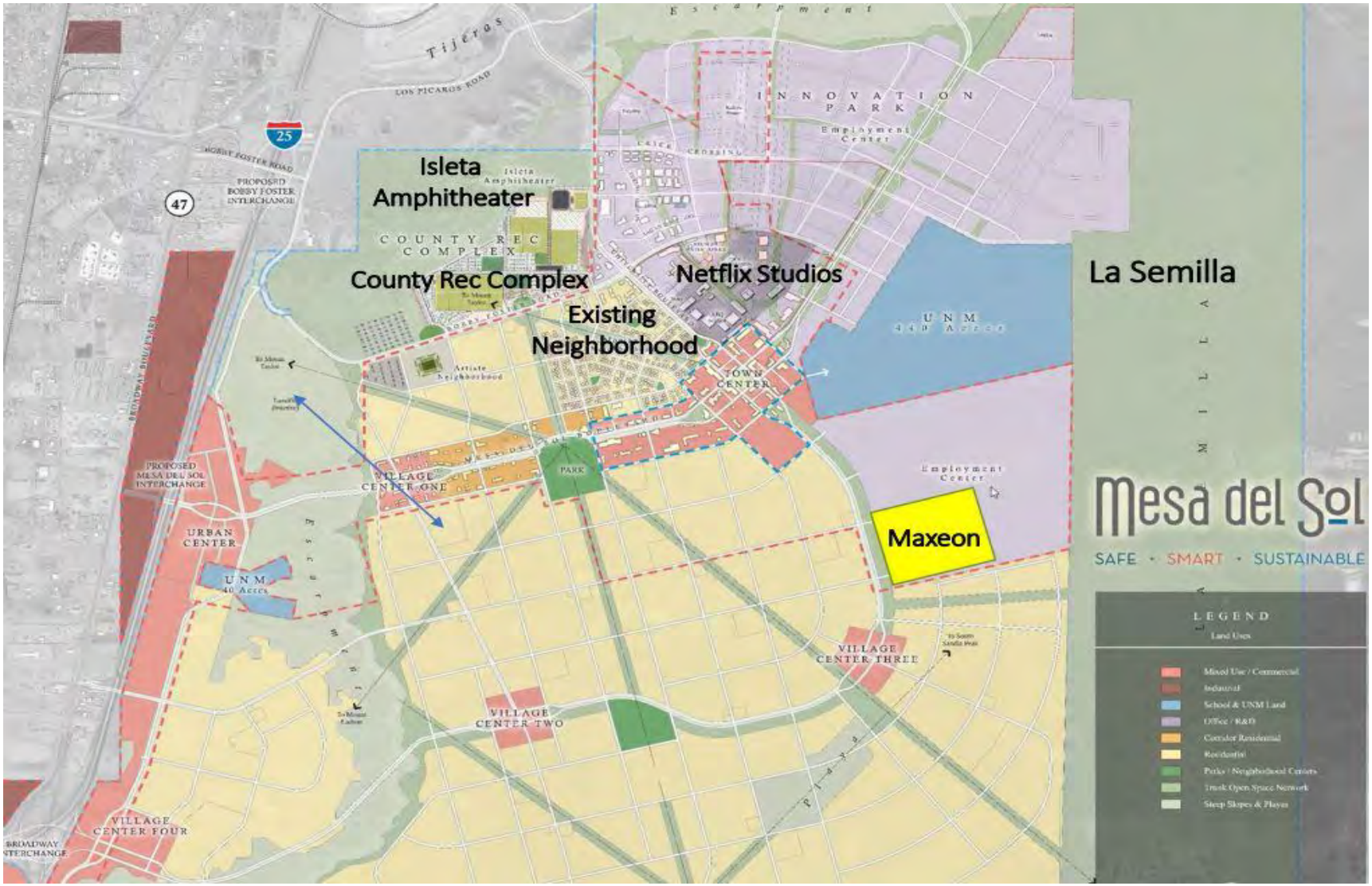
LPO is preparing this environmental assessment (EA) to address the construction and operation of a solar cell–fabrication facility and panel-assembly facility in Albuquerque, New Mexico. DOE is preparing this EA to comply with NEPA, Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500−1508), and DOE NEPA Implementing Procedures (10 CFR Part 1021). If no significant impacts are identified during preparation of this EA, then DOE will issue a Finding of No Significant Impact. If potentially significant impacts are identified, then DOE will prepare an environmental impact statement.

Maxeon proposes to construct the Golden Eagle Project at the Mesa Del Sol mixed-use master-planned community in Albuquerque, New Mexico (**Figure 2**). The Project site plan (**Figure 3**) shows the arrangement of the new manufacturing and assembly facility, which consist of a solar cell–manufacturing factory (Cell Fab) and a Module Company (MODCO), where the solar panels are assembled. The Cell Fab and MODCO buildings would be supported by a Central Administrative Building (CAB) and a Central Utility Building (CUB) within a Utility Support Courtyard (USC). The Cell Fab and MODCO buildings would have a new core and shell suitable for the manufacturing processes.

Anticipated environmental permits or authorizations include the following.

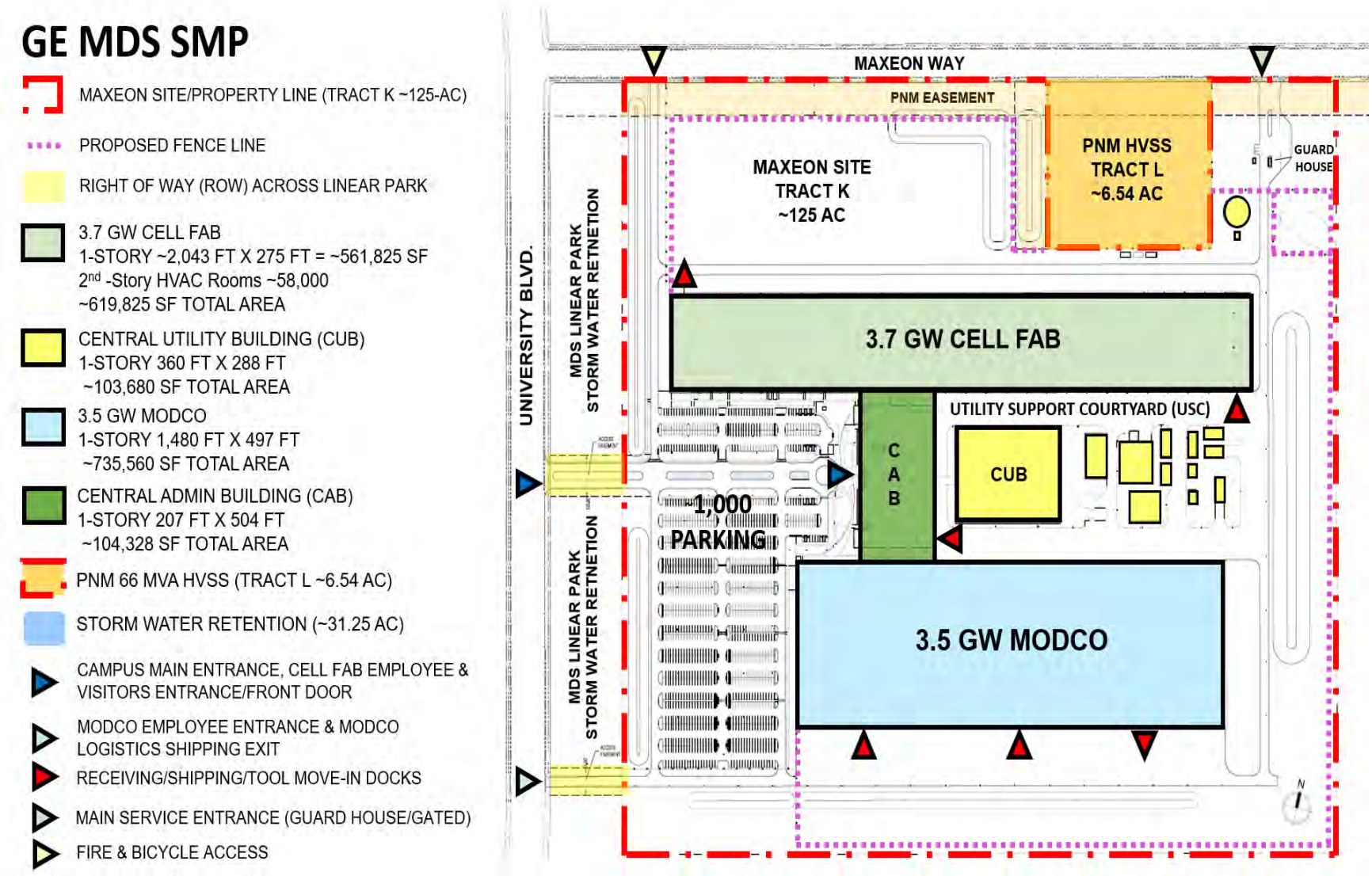
- Synthetic Minor Source Air Permit, City of Albuquerque Environmental Health Department
- Storm Water Pollution Prevention Plan (SWPPP), Albuquerque–Bernalillo County Water Quality Program
- Sedimentation and Erosion Control (S&EC) Plan, Albuquerque–Bernalillo County Water Quality Program
- Fugitive Dust Permit, Albuquerque–Bernalillo County Air Quality Program
- National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities – Environmental Protection Agency (EPA) Region 6
- Industrial Pretreatment and Discharge Permit, Albuquerque–Bernalillo County Water Utility Authority (ABCWUA)
- Spill Prevention Control and Countermeasure (SPCC) Plan – NMED
- Hazardous Waste Generator EPA ID Number – NMED

Figure 2: Mesa del Sol Conceptual Master Plan



Source: Mesa del Sol 2005, 2022.
(Annotated to locate Maxeon's parcel and notable landmarks.)

Figure 3: Golden Eagle Site Master Plan



Source: Maxeon 2023.

A list of permits that are planned or underway are provided in **Appendix A, *Permits and Approvals***.

This EA describes the construction and operation of a solar cell–manufacturing building and a solar panel–assembly building and describes their potential impacts on multiple resource areas. The resource areas assessed in this EA include the following.

- Cultural Resources, including Native American interests
- Water Resources, including groundwater and surface water
- Air Quality
- Noise
- Transportation
- Aesthetic and Visual Resources
- Biological Resources, including threatened and endangered species
- Socioeconomics and Environmental Justice (EJ)
- Health and Safety
- Waste Management
- Land Use
- Cumulative Impacts

These resource areas were identified as having the potential to be affected by the Project, and each was assessed to determine the nature, extent, and significance of the impacts (see Section 3, *Environmental Consequences*). The assessment combined desktop research and analysis of existing available information with select field studies, including site assessments related to the presence and/or absence of wetlands, waterbodies, threatened and endangered species, and cultural resources.

Resources not assessed in this EA include soils and prime farmlands, wetlands, waterways, and floodplains. Because the geographic location of the Project site is within the planned Mesa del Sol mixed-use development Project, impacts on those resources are not anticipated to be significant; therefore, they are not included in the scope of this EA. The Project site does not contain Prime Farmland, which is defined by the U.S. Department of Agriculture as lands that have the best combination of characteristics for producing food, feed, forage, fiber, and oilseed crops. Site grading and excavation activities would be subject to permit conditions of the Project's S&EC Plan; soils excavated from the Project site during construction are expected to be repurposed off site. Because the Project site is not classified as Prime Farmland, and grading and excavation activities would be subject to permit conditions, impacts on this resource are not anticipated to be significant; therefore, analyses of these resources are not included in the scope of this EA.

The Project site is located within dry, desert shrubland, and no wetlands or waterways are present on or adjacent to the Project site. No mapped floodplains are within or adjacent to the Project site. Pathfinder Environmental completed Project site visits in September 2023 to confirm the absence of any wetlands, waterways, or aquatic resources within the Project site. No wetlands, waterways, floodplains, or other waters of the United States were identified during

the site visits (**Appendix B, *Site Studies and Agency and Tribal Correspondence***). The nearest waterway is a drainage 2 miles to the east, on Kirtland Air Force Base. Stormwater management and retention structures that would be constructed for the Project would not be categorized as regulated waters.

2. DESCRIPTION OF THE PROPOSED ACTION

The Project is the construction and operation of a new PV solar-cell fabrication and panel-assembly facility, built entirely on a 125-acre parcel within a planned mixed-use development community (Mesa del Sol, **Figure 2**). The 125-acre parcel on which the Project would be constructed and operated defines the scope and limits of the proposed Project in this EA. The new facility would consist of a 561,825 square-foot solar cell–manufacturing facility (i.e., Cell Fab) and a 909,000 square-foot solar panel–assembly facility (i.e., MODCO). Each building would include a manufacturing area, manufacturing-support space, and warehousing.

The new facility would be accessed by University Boulevard (**Figure 2** and **Figure 3**). University Boulevard would be improved and extended according to the developer's overall Mesa del Sol Phase 1 (Level B) Master Plan (Mesa del Sol 2022). The main entrance to the Project site would be off of University Boulevard (**Figure 3**).

The Project would include two service entrances and exits, facility roads, logistics shipping, receiving and container yard, approximately 1,000 parking spaces, fire access roads/loops around each building, and five site stormwater management/retention ponds. During construction, typical building construction materials would be used, including, but not limited to, concrete foundations, structural steel, insulation, insulated metal panel, and insulated-thermoplastic polyolefin roofing.

The USC would include the CUB, cooling towers, pipe-conveyance trestles, Fluoride Waste Treatment Plant (FWTP), Silane or [silicon tetrahydride] (SiH_4) Area, Bulk Gas Yards, Nitrous Oxide (N_2O) Area, Liquified Gas Tank, and Waste Water Treatment plant.

The Cell Fab and MODCO buildings (**Figure 3**) would include a new core and shell that would be suitable for the cell-fabrication and panel assembly–manufacturing processes of the Golden Eagle Project. The Cell Fab and MODCO buildings would be supported by a CAB and a CUB within a USC. The USC (**Figure 3**) would host a CUB that comprises boilers, chillers, a reverse osmosis-deionized water unit, compressed dry air unit, Electrical Room, and Engineering Facilities Office. The USC would also host cooling towers, emergency generators, the FWTP, acid-waste neutralization (AWN) system, Acids and Caustics Chemical Storage Buildings, Used Chemical Container Storage Building, N_2O, ammonia (NH_3), and SiH_4 Bulk Gas Yards, and utilities conveyance trestles.

The development of the Golden Eagle Project would disturb the entire Project site (approximately 125 acres) (**Figure 2**), which includes the following.

- An approximate 561,825-square-foot solar cell–manufacturing facility (Cell Fab, **Figure 3**) and an approximate 909,000-square-foot solar panel–assembly facility (MODCO, **Figure 3**)
- Approximately 103,680 square feet for the CUB, including the Bulk Gas Yards, hazardous materials storage, emergency generators, and the Wastewater Treatment Facility, including the FWTP and AWN system (**Figure 3**)
- Approximately five stormwater retention–pond areas covering a total approximate land area of 31.25 acres
- Internal roads, sidewalks, and 1,000 parking spaces, totaling approximately 26 acres

Access to the Project site would occur via University Boulevard, which is approximately 3.5 miles east of Interstate (I-) 25. Based on Project site history and conduct of a Phase I Environmental Site Assessment, the Project site is currently undeveloped, with no evidence of prior uses. Construction is anticipated to begin in in Q1 2024, to be completed in approximately 19 months, to become operational in 2025, and to be in operation for at least 20 years.

2.1 Construction

2.1.1 Construction Phasing

The Project would be constructed in phases, starting with the establishment of sedimentation- and erosion-control measures in accordance with the SWPPP and S&EC Plan, rough grading, and clearing. Phase 1 would include installation of utilities and the Cell Fab, and Phase 2 would include the MODCO, site stabilization, and landscaping. An estimated cut (i.e., material to be removed from the Project site) of approximately 832,000 cubic yards would be required to develop the facility, and estimated fill material of approximately 49,000 cubic yards would be brought to the Project site. Maxeon anticipates that soils excavated from the Project during construction would be repurposed off site.

Overall construction would take 19 months to complete, followed by equipment trials, with comprehensive trial operations scheduled to begin in June 2025.

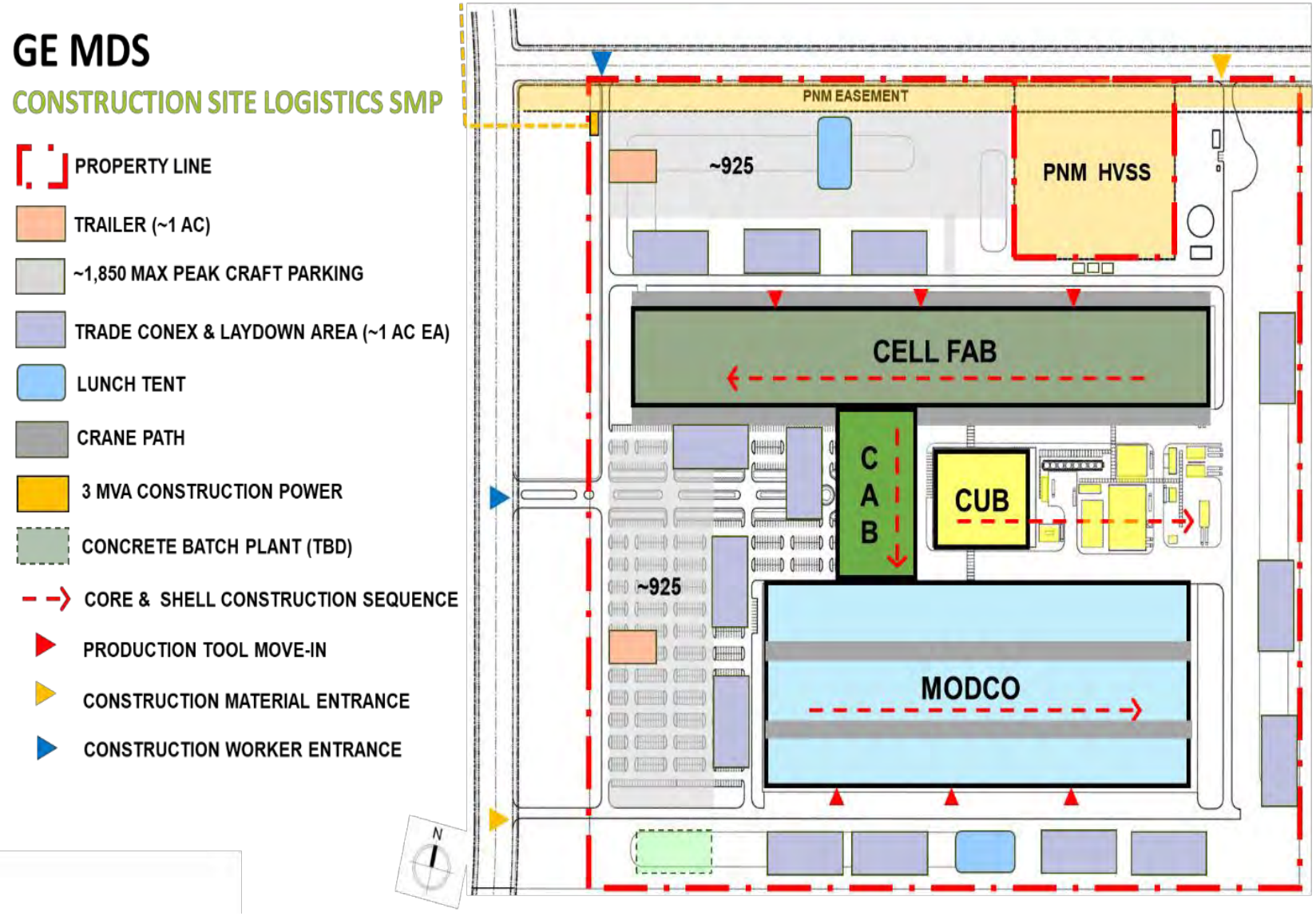
2.1.2 Construction of Project Structures, Utilities, and Equipment Installation

During construction mobilization, construction facilities, including office trailers, craft parking, trade containers, laydown yards, crane paths, lunch tents, and a concrete batch plant would be established and maintained within the 125-acre Project site (**Figure 4**).

Typical building construction materials would be used, including foundation pilings, steel, poured and pre-fabricated concrete, crushed stone, lighting fixtures, roof deck, rubber membrane roofing, insulation, electrical switchgear and transformers, heating, ventilation, and air conditioning equipment, flooring products, and common fixtures and furnishings used to fit out offices, cafeterias, and restrooms.

Additionally, to outfit the buildings for Maxeon's manufacturing purposes, a clean room would be built in the Cell Fab (**Figure 3** and **Figure 4**). The Cell Fab manufacturing floor, H-5 Occupancy per International Building Code (IBC 2021), requires installation of Class 1,000 (ISO 6) and Class 10,000 (ISO 7) Cleanroom to ISO Standard 14644-1:2015: *Cleanrooms and associated controlled environments*). These classes refer to the maximum particle-size limits and airborne-particle counts allowed within the manufacturing area. Cell Fab clean rooms comprise epoxy and stainless-steel flooring, epoxy on gypsum–board walls, aluminum cleanroom wall panels, a cleanroom ceiling grid with diffusers, lights, fire-sprinkler heads, make-up and return air–handling systems, and a steel catwalk-access above. A mixed-use support wing would span the length of the Cell Fab comprising B, A-2, F-2, S-1, H-2, H-3, and H-4 occupancies for specialty-gas and chemical storage and distribution to the manufacturing equipment (**Figure 3** and **Figure 4**). The support spaces comprise epoxy-coated concrete floors, painted gypsum board,

Figure 4: Conceptual Site Logistics Site Master Plan



Source: Maxeon 2023.

CMU walls with gypsum-board ceilings, and housing mechanical-, electrical-, and process-support facilities and chemical- and gas-delivery systems.[2]

Support buildings would be composed of concrete foundations, tilt-up concrete (i.e., concrete wall poured horizontally then tilted into a final vertical position), and/or pre-engineered metal buildings.

Infrastructure and roads would be extended to the Project site by Mesa del Sol and the local utility entities. This infrastructure is part of the overall planning and development of Mesa del Sol's Phase 1 Project and is not part of the proposed Project. The additional infrastructure that Mesa Del Sol and the local utility entities are developing includes the following.

- **Roads**: As part of its Phase 1 Master Plan (Mesa del Sol 2005), Mesa del Sol would extend University Boulevard approximately 4,800 linear feet to the Project site and construct Maxeon Way, approximately 3,360 linear feet, along the northern boundary of the Project site.
- **Power**: The electric utility, the Public Service Company of New Mexico, would provide primary and secondary 115-kV transmission lines to a new, 66-mega volt amp High-Voltage Substation adjacent to the Project site.
- **Water**: ABCWUA would install and maintain the water supply extension.
- **Storm Sewer**: ABCWUA would install and maintain the storm sewer extension.
- **Sanitary Sewer**: ABCWUA would install and maintain the sanitary sewer extension.
- **Reuse Water**: ABCWUA would install and maintain the reuse water extension.
- **Advanced Water Treatment Plant** (AWTP): ABCWUA would build, operate, and maintain the AWTP.
- **Natural Gas Service**: New Mexico Gas Company would extend a new natural-gas line to the Project site.
- **Broadband Fiber**: A vendor to be decided would extend the broadband fiber line to the Project site.

Following construction, a landscape design plan that strikes a balance between providing a pleasant, stable, and native environment suitable for human livability and stabilizing disturbed soils to the maximum extent possible would be implemented. All plant material chosen for the Project would be appropriate species suitable to the site's xeric conditions. The Project landscape-design plan would conform to the Mesa del Sol development plan and conditions.

2.1.3 Project Schedule

General construction is scheduled to begin in February 2024 and is expected to be completed within 19 months (**Table 1**). Equipment installation is planned to begin in early 2025. Startup for trial operations, debugging, and validation would occur sequentially, as equipment is installed,

[2] *IBC classifications* refer to classification and subclassification of buildings for specific high-hazard occupancies. Under IBC Occupancy Classification Section 307: *High-Hazard Group H*, H-1 is the subclassification for buildings that contain hazardous materials that pose a detonation hazard, H-2 is the subclassification for buildings that contain hazardous materials that pose a deflagration hazard or a hazard from accelerated burning, and H-3 is the subclassification for buildings that contain hazardous materials that readily support combustion or that pose a physical hazard (IBC 2021).

with the facility becoming operational in the Q4 2025. Full operation production is expected in July 2026.

Table 1: Project Golden Eagle Milestone Schedule

Event	Projected Timeframe
Clearing and Grubbing	February 2024
Construction Mobilization	March 2024
Start of Construction	April 2024
Room Ready	July 2025
Start of Module Operations	December 2025
Start of Cell Fab Operations	March 2026

Note: The schedule for construction of offsite utility connections, Project site-access roads, offsite wastewater treatment, and other offsite infrastructure that Mesa del Sol and/or utility service providers would provide for the Project is not included in Table 1. Maxeon anticipates that the schedule for offsite construction would conform to the schedule for Project construction and operation.

Installation of the manufacturing equipment in the buildings would be completed in phases to support a ramp-up of production and the availability of skilled trade resources, with initial equipment arriving on the Project site in early 2025 and continuing through fall 2025. Following that, trials and debugging would be performed in phases, beginning in fall 2025, and would continue through early 2026.

2.2 Operation

The overall manufacturing process consists of a PV cell-fabrication process and a solar panel–assembly process. The cell-fabrication process involves the use of silicon wafers, silver and aluminum pastes, screen and packaging materials, and the 12 chemicals and gasses presented in **Table 2** and **Table 3**.

Table 2: Chemicals and Gasses Consumed in Photovoltaic Cell Fabrication

Chemical/Gas	Annual Amount Expected to Be Used (2026)	Maximum Amount Expected to Be Stored On Site
1. Ammonia (NH_3)	52,772 kilograms	4,934 kilograms
2. Boron Trichloride (BCl_3)	1,387 liters	130 liters
3. Hydrogen Chloride or Hydrochloric Acid (HCl)	331,225 liters	45,425 liters
4. Hydrogen Fluoride or Hydrofluoric Acid (HF)	1,382,171 liters	117,348 liters
5. Hydrogen Peroxide or Hydrogen Dioxide (H_2O_2)	2,043,327 liters	117,348 liters
6. Nitrogen (N_2)	5,422,344 kilograms	506,976 kilograms
7. Nitrous Oxide (N_2O)	31,896 kilograms	2,982 kilograms
8. Oxygen (O_2)	287,065 kilograms	26,840 kilograms
9. Phosphorus Oxychloride (Phosphoryl Chloride) ($POCl_3$)	1,164 liters	109 liters
10. Silane or Silicon Hydride (SiH_4)	27,782 kilograms	2,598 kilograms
11. Sodium Hydroxide (NaOH)	1,104,101 liters	98,421 liters
12. Trimethyl Aluminum	558 kilograms	52 kilograms

Source: Maxeon 2023.

Table 3: Estimated Annual Resource Consumption – Full Operations

Category	Item	Quantity	Units	Basis
Resource Inputs (Consumption)	–	–	–	–
Energy	Electricity	416,275,200	kW-hr/year	Calculated
Energy	Natural Gas	835,704,000	SCFY	Calculated
Water	Water	1,095	MGPY	Calculated
Cell BOM	Si-Wafer	357,755,000	wafers/year	Calculated
Cell BOM	Ag Paste	45,349	kg/year	Calculated
Module BOM	Glass	11,197,200	sheets/year	Calculated
Module BOM	Encapsulant	15,549,765	m^2/year	Calculated
Module BOM	Frame	15,726,702	kg/year	Calculated
Module BOM	RTV	1,706,240	kg/year	Calculated
Module BOM	J-Box	15,996,000	units/year	Calculated
Module BOM	Pottant	156,174	kg/year	Calculated
Outputs	–	–	–	–
Finished Goods	Solar Panels	5,833,333	units/year	Calculated
Scrap	Solar Panels	87,500	units/year	Calculated
Scrap	Photovoltaic Cells	17,887,750	units/year	Calculated

Source: Maxeon 2023.
BOM = Bill of Materials; kg = kilograms; kW-hr = kilowatt hour; m^2 = square meters; MGPY = million gallons per year; Mkg = million kilograms; SCFY = standard cubic feet per year.

The solar panel–assembly process uses the following commodities: glass, PV cells, wires, miscellaneous tapes, encapsulant sealant, extruded aluminum frames, electrical-junction boxes, diodes and diode boxes, various silicone-based adhesive and potting materials, bus bars, and solder. Most of the commodities would be imported by sea freight and transported to the facility by an intermodal rail and truck.

2.2.1 Water and Utilities

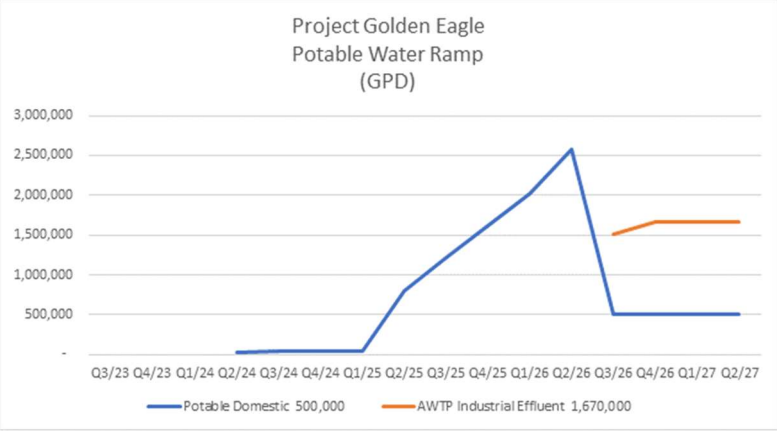
ABCWUA would provide water service to the Project area. Their water source is groundwater from the Santa Fe Group Aquifer and surface water from the San Juan–Chama Drinking Water Project. Together, these sources produce an average of 32 billion gallons of water each year, or 87.7 million gallons of water a day (MGD) (City of Albuquerque 2023a; ABCWUA 2023).

ABCWUA *Water 2120 Plan* (ABCWUA 2016) is a 100-year plan that accounts for the Albuquerque area's groundwater, surface water, and reuse resources to manage and satisfy current and future water-system demands, while maximizing ongoing conservation efforts and opportunities. For the Maxeon facility, the water-supply approach would involve only minimal potable water supply to Maxeon, with the bulk of Maxeon's process-water demand being provided via treated reuse water from the Water Authority's Southside Water Reclamation Facility and treatment/recycling of a portion of Maxeon's wastewater through the ABCWUA-operated offsite AWTP facility. In this way, Maxeon and Mesa del Sol's irrigation and industry demands would be met with treated, nonpotable reuse water instead of potable water, which is an important and significant component of ABCWUA's *Water 2120 Plan* and ensures that the Maxeon facility would cause no undue stress on the existing/future water systems.

Construction of the AWTP is expected to commence in 2025 and continue through 1Q 2026. Maxeon anticipates that Project operations would commence in 2025 and that treated reuse

water would not be available to Maxeon until commencement of the AWTP operations in 1Q 2026. To supply their Project construction and processing activities during construction of the AWTP facility in 2025 and 2026, Maxeon would utilize potable water that ABCWUA would temporarily provide during this interim period. Maxeon's interim water demand would ramp from 1 MGD in 2025 to 2.8 MGD in 2026 (Maxeon 2023), with the maximum demand of 2.8 MGD anticipated in February 2026, an amount that would still be well below the 5 MGD of total potable water supply currently available to Mesa Del Sol. Temporary use of water supplied by ABCWUA during the interim period would not affect the availability of water to other users within the Mesa del Sol development. After the AWTP commences operation, the Maxeon facility would use primarily treated reuse water for Project operations, as shown on **Figure 5**.

Figure 5: Water Demand Ramp-Up Schedule



Source: Maxeon 2023.

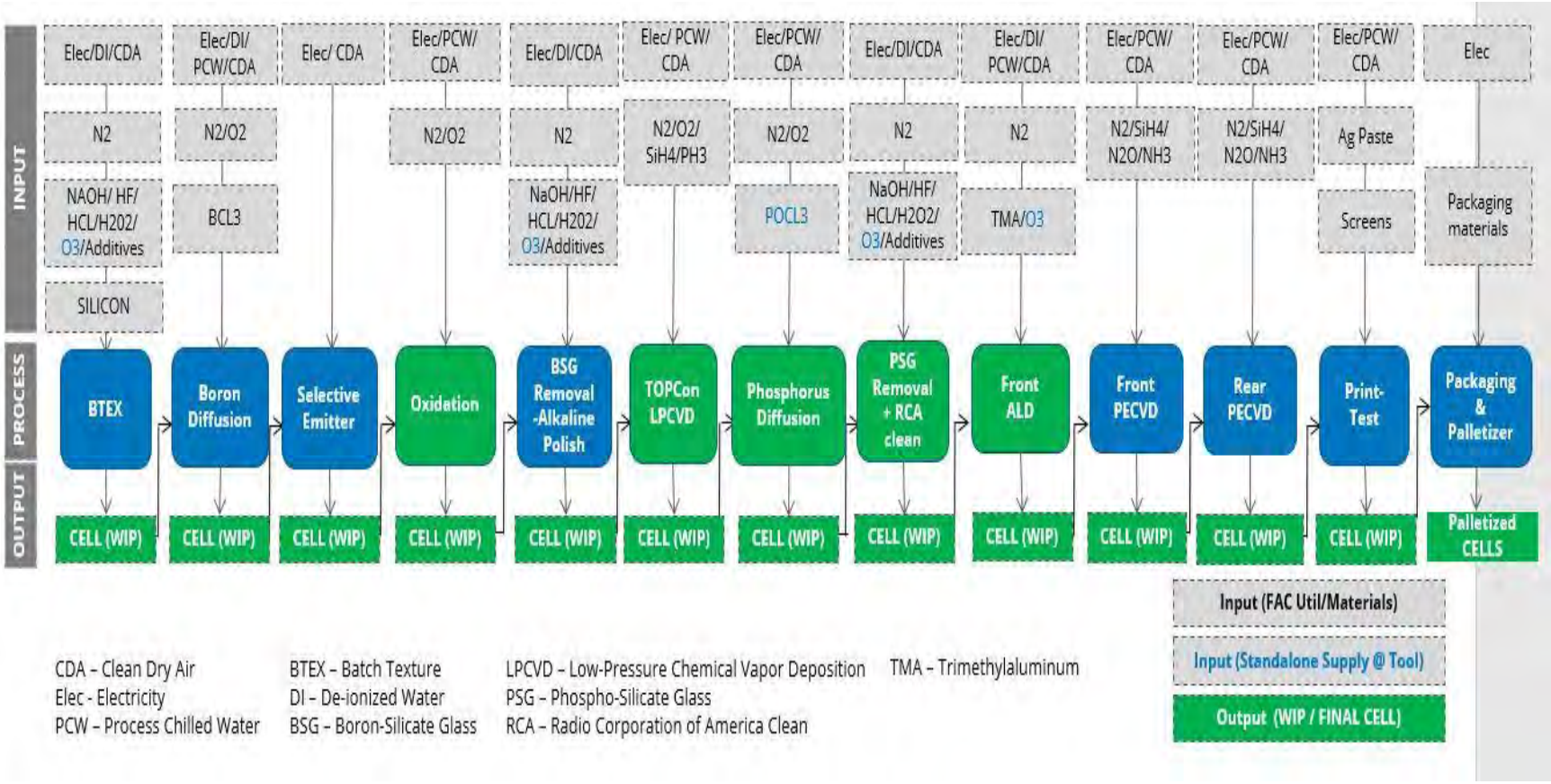
When operating at full capacity, Maxeon would consume approximately 0.5 MGD of potable water and 2.3 MGD of treated reuse water (Maxeon 2023). Maxeon's main uses of water would be make-up water to its deionized water system (used for rinse water in its manufacturing process) and make-up water to the cooling towers. The rate of potable water and treated reuse water consumption would be approximately steady-state. The facility would be served by a 30-inch-diameter water main adjacent to the property, along University Boulevard Southeast, which ABCWUA would build and maintain. A 12-inch distribution line would run along the northern roadway, which runs parallel to the Project site. Approximately 80 percent of the water consumed in the factory would be recycled.

2.2.2 Manufacturing Process Summary

The process for silicon PV-cell fabrication (**Figure 6**) involves converting silicon wafers into PV material using a series of wet chemical processes that etch and texture the wafer, applying coatings through chemical-vapor deposition, screen-printing conductive features with aluminum and silver pastes, conducting performance and quality testing, sorting, and packaging. In order to achieve the most consistent results and highest performance, the process would require pressure, temperature, humidity, and cleanliness to be closely controlled.

The PV cell-fabrication process makes use of highly automated equipment to transfer the silicon wafers between tools and process steps. The process itself consists of etching to remove saw damage that results from wafer-cutting, cleaning, doping, deposition, metallization, passivation, and separation, followed by testing and packaging. The partially processed cells (or Works in Progress) are transferred by automated guided vehicle between tools. The detailed process flow

Figure 6: Photovoltaic Cell Tunnel Oxide Passivated Contact Fabrication Process Flow



Source: Maxeon 2023.

for Tunnel Oxide Passivated Contact (TOPCon) technology is described on **Figure 6** on the previous page.

The process to assemble a Maxeon Performance Line shingled panel involves several light mechanical and electrical assembly steps, beginning with the stringing process which prepares the solar cells by arranging them into hypercells or diced cells. The cells are then interconnected to one another in a serial circuit using electrically conductive adhesive. Multiple hypercells are then arranged in a parallel circuit and packaged with encapsulant material between two sheets of solar glass, for a typical bifacial panel used in utility powerplant applications.

The lamination process subjects this package to pressure and temperature, which melts and crosslinks encapsulant material. An aluminum frame is then attached around the laminate's perimeter, and a junction box is installed on the rear side, which provides the functional electrical connection to the solar panel. The panel is then subjected to end-of-line testing, where its performance characteristics and other parameters are collected. It is then labeled, binned (i.e., sorted), packaged, and palletized with other panels of similar characteristics. The detailed process flow is described in **Figure 7**, on the next page.

2.2.3 Staffing and Operational Timeframe

Construction activities and postconstruction operations would provide additional job opportunities within the local community. During construction and trial operations, which would take place over 19–24 months (i.e., 19 months for construction, 5 months for trial operations), about 1,900 people would be employed, including engineers, designers, project managers, construction workers, and trades craftsmen. This figure reflects a headcount peak expected at about the tenth month. During the full construction period, the headcount would vary between 190 and 1,900 people employed.

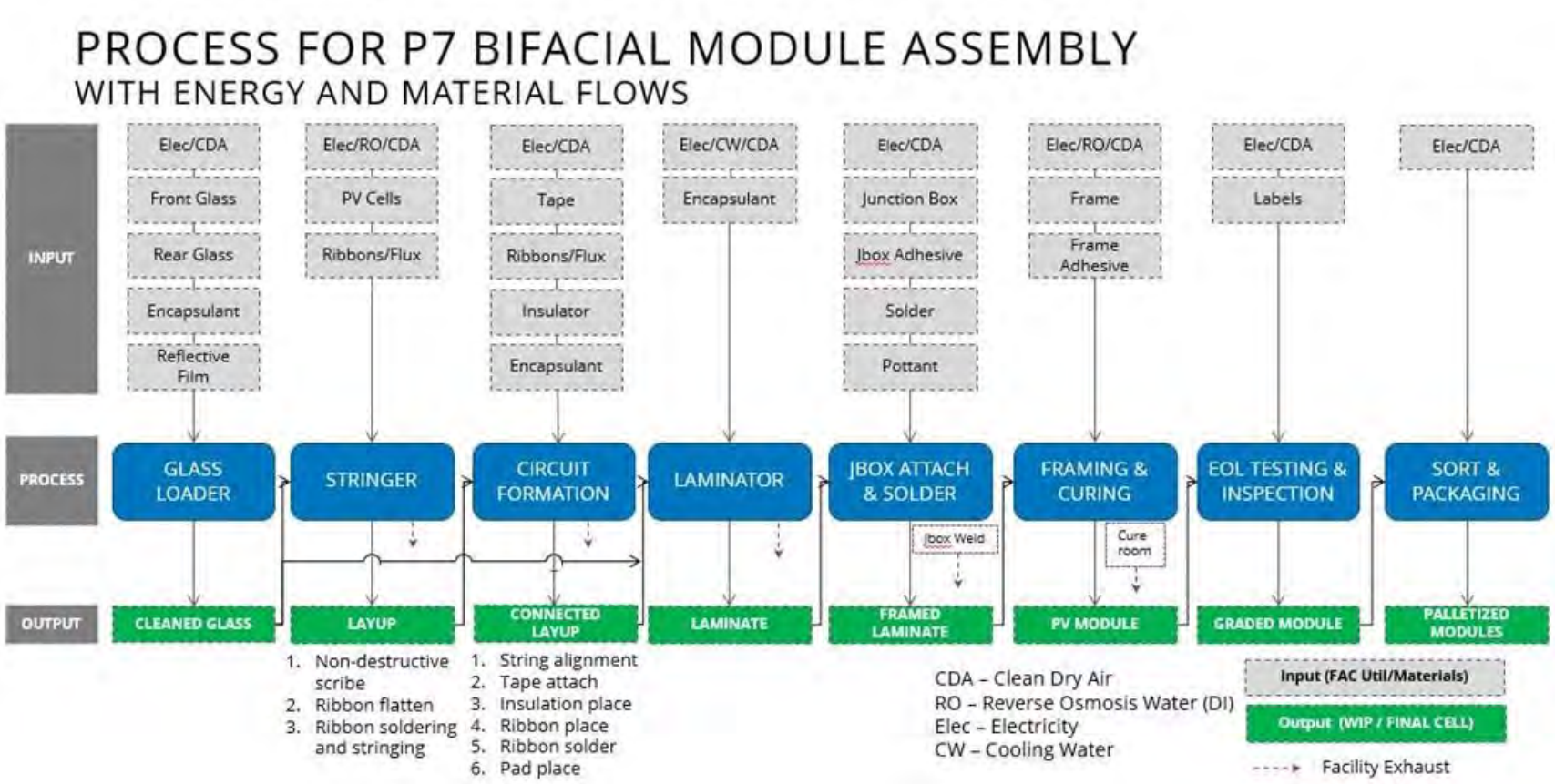
During operations, once the factory is ramped to its full output capacity, Maxeon would employ up to 1,400 people, including engineers, managers, administrative-support personnel, skilled technicians, facility and equipment managers, maintenance workers, factory operators, and logistics personnel. The factory would operate on a 24 × 7 × 365 schedule, utilizing four shifts per day.

The Project is expected to become operational in 2025 and be in operation for at least 20 years.

2.2.4 Shipping and Receiving

Raw materials for the Project would be trucked to the Project site, which would require approximately 180 inbound trucks per week (i.e., approximately 26 incoming trucks per day). Outgoing product shipping would require approximately 200 weekly truck trips (i.e., approximately 29 outgoing trucks per day) to deliver the solar panels to Maxeon's customers. Outgoing product waste would require approximately 56 outgoing trucks per week (i.e., approximately eight outgoing trucks per day).

Figure 7: Shingled Panel Assembly and Lamination Process Flow



2.2.5 Hazardous Material Handling and Waste Management

All solid waste generated during the construction phase of the Project would be managed and transported in accordance with all federal, state, and local regulations. During construction, Project-related waste streams would include waste generated during general construction activities, including wood, plastics, glass, metal scrap (e.g., steel, aluminum), surplus concrete, and other packaging materials. These waste streams would be collected, diverted, and sorted for recycling off site or disposed of at an approved solid-waste landfill. Construction debris generated during Project site preparation and construction, including excavated soils, would be recycled or repurposed off site as feasible.

For hazardous waste, Maxeon is in the process of obtaining an EPA Resource Conservation and Recovery Act Hazardous Waste Generator ID Number (**Appendix A**) and would comply with all applicable hazardous waste generation, management, and accumulation requirements for large-quantity generators (see Section 3.4, *Air Quality*, and Section 3.11, *Waste Management*). Hazardous wastes generated on site would be transferred to designated hazardous waste–accumulation areas for subsequent offsite transport by a licensed hazardous waste hauler to a licensed treatment, storage, and disposal facility.

3. ENVIRONMENTAL CONSEQUENCES

3.1 Introduction and General Setting

Each of the following sections addresses a specific research area with qualitative and, where applicable, quantitative information, to concisely describe the nature and characteristics of the resource that the Project may be affect, giving the potential direct and indirect impacts on that resource from the Project, given proposed Project controls. A conclusion regarding the significance of impacts is provided for each resource area.

Section 3.13, *Cumulative Impacts*, provides a review of the present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Project. To establish the current condition of the resource (i.e., the baseline condition), the impacts of past actions were reviewed and are included as part of the Project's affected environment.

The Project is located within desert shrubland, known as the Plains Mesa Sand Scrub. Precipitation is approximately 8 inches per year, with most moisture occurring in the form of rain during July and August. Sandy loam soils and consistent winds contribute to significant dust storms and accumulations of sand in the built environments in this region. Most of the Project area consists of open, dry shrubland, dominated by sand sage (*Artemisia filifolia*), with an understory of various grasses and forbs. Interspersed within the shrubland are some small, relatively shallow swales, dominated by big galleta (*Hilaria rigida*), with lesser amounts of alkali sacaton (*Sporobolus airoides*). No above-structures are within the Project site, nor mapped subsurface utilities.

3.2 Cultural Resources

A Class I records review for known archaeological sites within 0.8 kilometers (0.5 mile) of the Project area, a Class III Pedestrian Survey of the Project area, and site testing completed between August 7 and November 6, 2023, revealed no known sites within the Project area, nor sites eligible for listing on the National Register of Historic Places. LPO reviewed the findings and concluded in a letter dated November 8, 2023 (**Appendix B**), that the undertaking would

not affect historic properties. Tn their response, dated November 30, 2023 (**Appendix B**), the New Mexico State Historic Preservation Officer (SHPO) concurred with LPO and the Class III findings.

In the event that cultural resources (e.g., human remains, lithics, pottery, remnants of older construction) were discovered during the Project, work would cease in the vicinity of the discovery, and the Office of the State Archaeologist would be notified. A qualified archaeologist or a designated representative of the State Archaeologist or State Historical Center would evaluate any such discovery and, in consultation with the SHPO, implement the appropriate measures before construction activities in the vicinity of the discovery could resume.

Because of the absence of National Register of Historic Places-eligible cultural resources within the Project site and the measures in place in the event of an unanticipated discovery of cultural resources, the Project-related impacts on cultural resources would not be significant.

3.2.1 Native American Interests

In conjunction with the National Historic Preservation Act, Section 106 historic and archeological review processes, DOE mailed a request for comments on August 25, 2023, to six separate Federally Recognized Tribes: Apache Tribe of Oklahoma; Comanche Nation, Oklahoma; Navajo Nation, Arizona, New Mexico, and Utah; Pueblo of Isleta, New Mexico; Pueblo of Laguna, New Mexico; and Pueblo of Sandia, New Mexico (**Appendix B**). In the notification letters, DOE requested comments about nearby cultural resources and any comments or concerns that the tribes may have about the potential for those resources to be affected by construction of the Project. After 30 days without response, DOE followed up the letters with a phone call to each of the tribes. Following the subsurface testing completed in early November 2023, DOE sent another letter, on November 15, 2023, to each of the tribes, offering to provide the reports on request and providing the opportunity for government-to-government consultation. To date, no responses or comments have been received.

Due to the location of the Project site within a planned mixed-development community, the absence of any expressed interests from the tribes contacted, and the measures in place in case of an unanticipated discovery of cultural materials, impacts on Native American interests resulting from the Project would not be significant.

3.3 Water Resources

3.3.1 Groundwater and Surface Water

As mentioned above in Section 2.2.1, *Water and Utilities*, the Project would obtain its water from ’ABCWUA, including potable water and treated reuse water from the AWTP (City of Albuquerque 2023a).

ABCWUA's *Water 2120 Plan* (ABCWUA 2016) (discussed in Section 2.2.1, *Water and Utilities*) accounts for the Albuquerque area’s groundwater, surface water, and reuse resources. During construction of the AWTP facility in 2025 and 2026, Maxeon would temporarily utilize potable water from ABCWUA to supply its Project construction and processing activities. Maxeon’s interim water demand would ramp up from 1 MGD in 2025 to 2.8 MGD in 2026; however, the maximum demand of 2.8 MGD demand still would be well below the 5 MGD of total potable-water supply currently available to Mesa del Sol. Temporary use of ABCWUA-supplied water during the interim period would not affect the availability of water to other users within the Mesa del Sol development. During post-2026 operations, Maxeon would consume approximately 0.5 MGD of ABCWUA-supplied potable water, an estimated 1.1 MGD of reuse water from

ABCWUA's Southside Water Reclamation Facility, and an estimated 2.77 MGD of reuse water from ABCWUA's AWTP facility.

An S&EC Plan and SWPPP to support the NPDES stormwater permit (**Appendix A**) for the Project are being developed to provide various erosion- and sediment-control measures that would prevent sediment runoff from the site. These measures would include the installation of the silt fencing around the perimeter, construction-entrance vehicle track-out measures, concrete waste-disposal areas, and preservation of existing vegetation, where allowed. The measures would be installed prior to the start of construction and maintained throughout the duration of construction activities, until the site is stabilized. Inspection of the sediment- and erosion-control measures would occur regularly and after storm events, which is a requirement of the SWPPP.

Project construction would be performed under terms required by an NPDES General Permit for Stormwater Discharges from Construction Activities, as well as the SWPPP and S&EC Plan mentioned above.

The Project would result in approximately 70 percent (or approximately 88 acres) of the Project site being covered by impervious surfaces, including the new buildings, paved parking, driveway, and sidewalk areas. The Project development plan allows for sufficient open space and landscaped areas to meet the local Mesa del Sol requirement (City of Albuquerque 2023c) of retaining 100 percent of stormwater on site. The City of Albuquerque (City) requires that the 100-year, 10-day storm event be fully retained for developed conditions (i.e., increased impervious surface area) (City of Albuquerque 2023c). All surface stormwater would be contained on-site in compliance with the specifications outlined in MDS development requirements (City of Albuquerque 2023c). The curent site plan delineates the assigned stormwater-retention ponds, along with their respective sizes, which are intended to capture and absorb site runoff from a 100-year storm event. The Project site would have retention ponds located along its perimeter within available open space, sized to accept and retain the stormwater flows (i.e., approximately 32 acre-feet of stormwater) on the Project site. These ponds would be incorporated into the landscape with native vegetation.

Due to the current plans for municipal and reclaimed water use, construction and operation of permitted stormwater control and management systems, and treatment of stormwater and wastewater during construction and operation, Project impacts on surface water would not be significant.

Hazardous-material liquids used on site, including acids, caustics, and petroleum products, would be stored in containers that meet applicable standards and have monitoring and secondary-containment systems to prevent, detect, and contain spills. Petroleum products would be stored and managed in accordance with the Project site SPCC Plan and stormwater-management system requirements. Because of these control and management systems for onsite hazardous liquids, impacts on groundwater and/or surface water as a result of the Project would not be significant.

3.4 Air Quality

As directed by the 1990 Clean Air Act Amendments, EPA set National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants: carbon monoxide (CO); nitrogen dioxide (NO_2); ozone (O_3); particulate matter less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$); sulfur dioxide (SO_2); and lead. States are required to adopt standards that are at least as stringent as the NAAQS (40 CFR § 50). New Mexico has adopted NAAQS per New Mexico Administrative Code (NMAC), Title 20, Chapter 11, Albuquerque–Bernalillo County Air Quality Control Board. The Albuquerque–Bernalillo County area is

designated as being in attainment for the six criteria air pollutants (City of Albuquerque 2023b) and has no history of nonattainment.

Expected air emissions from Project operations include criteria air pollutants, hazardous air pollutants (HAPs), including hydrogen fluoride, chlorine, hydrogen chloride, and zinc (EPA 2023a), products of natural gas and diesel fuel combustion, and toxic air pollutants. The Project would utilize multiple wet-scrubber systems, other point-of-use controls, and drift eliminators within the cooling towers. With the use of these air-pollution controls, emissions of criteria air pollutants and HAPs are expected to fall below major-source thresholds. Therefore, the Project would be subject to synthetic minor-source air-permitting requirements. As part of minor-source air-permitting, dispersion modeling would be conducted, as required by New Mexico regulations.

Synthetic minor-source air permits limit controlled criteria pollutants to less than 100 tons/year and HAP emissions to less than 10 tons/year for an individual HAP and less than 25 tons/year for combined HAPs. Based on preliminary emissions estimates (**Table 4**), the Project is expected to remain below these limits, and the facility would apply for a Synthetic Minor Source Air Permit (**Appendix A**) with the City's Environmental Health Department. The proposed facility has conducted air-dispersion modeling, as specified in NMAC Regulation No. 20.2.72.400-405 (**Appendix A**). The City officially received Maxeon's air-permit application on November 30, 2023, and ruled it administratively complete on December 7, 2023. Maxeon anticipates that the City will approve the facility's air-permit application and issue the permit by February 29, 2024.

Table 4: Facility's Potential to Emit (tons per year)

Source	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	HAPs
Total Uncontrolled Project Emissions	143	22.3	6.93	1.69	36.9	35.8	194
Total Controlled Project Emissions	82.5	22.3	5.77	1.69	2.94	1.83	12.2
Minor New Source Review Thresholds[1]	100	100	100	100	100	100	10 single 25 total
Uncontrolled Emissions Exceed Thresholds?	Yes	No	No	No	No	No	Yes
Controlled Emissions Exceed Thresholds?	No	–	–	–	–	–	No

[1] *Source: New Mexico Administrative Code 20.11.61.20.*
CO = carbon monoxide; HAPs = hazardous air pollutants (including hydrogen fluoride, chlorine, hydrogen chloride, and zinc); NO_X = nitrous oxides; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; PM_{10} = particulate matter less than 10 microns in diameter; SO_X = sulfur oxides; VOC = volatile organic compounds.

Additionally, a fugitive-dust permit is required for construction projects that would disturb 0.75 acre or more of soil. A fugitive-dust permit application would be prepared with inputs from Maxeon's team on specifications of the actual control measures that would be taken to reduce fugitive-dust emissions during construction.

Because the project site is in an air-quality attainment area, the below threshold amounts of anticipated criteria and HAP emissions, and the air-emission controls that would be implemented during Project construction and operation (e.g., multiple wet-scrubber systems, operational plans for control of and response to equipment malfunctions, drift eliminators within the cooling towers, good-engineering-practice stack heights), impacts on air quality as a result construction and operation of the Project would not be significant.

3.5 Noise

Noise is any unwanted sound that penetrates the environment or interferes with normal communication or activities. Noise would be expected from sound sources arising from both construction and operation of the Project. The immediate surrounding area of the Project site is

characterized by state and private undeveloped lands, followed by I-25 to the west, state and tribal undeveloped land to the south, federal and state land to the west, and undeveloped private land to the north. The nearest noise-sensitive receptors are residences located approximately 1.25 miles northwest of the Project site.

The Project would generate temporary noise during construction from heavy machinery, such as bulldozers, graders, excavators, dump trucks, and cement trucks, as well as smaller tools, such as jackhammers and nail guns. Noise and sound levels would be typical of new construction activities and intermittent and temporary. The exterior noise generated during Maxeon's site construction would comply with the City of Albuquerque's Noise Control ordinance, which specifies that noise levels must be lower than 75 decibels (dBs) in the daytime, and 70 dBs at night (City of Albuquerque Ordinances, Article 9, *Noise Control*). Given the distance of the site from the nearest development and residential areas, it is not anticipated that construction noise would pose a concern. However, in the event that amplified or construction noise becomes a factor during the construction-planning phase, the General Contractor would submit an application for a Temporary Permit for Amplified Sound or Construction Noise in accordance with provisions of the City's Noise Ordinance Article 9-9-5, *Temporary Permits for Amplified Sound or Construction Noise*, and would conduct noise monitoring if required.

At the current stage of preconstruciton planning, the need to obtain a temporary permit is not anticipated. Construction activities would be limited to daytime, generally between the hours of 6:00 a.m. to 8:00 p.m., Monday through Saturday. Due to controls that would be implemented during construction (i.e., time limits) and the nature of the area surrounding the Project site (i.e., adjacent to primarily undeveloped land), impacts from construction noise as a result of the Project would not be significant.

The industrial process/manufacturing operations at the facility operations would not add to the local ambient noise levels because the manufacturing processes would be conducted within enclosed buildings, and noise-generating equipment in the USC would be buffered and/or screened by the larger manufacturing buildings to be within the noise limits at property line for General Manufacturing – Non-Residential land use (see **Figure 1** and **Figure 2**). Once the facility is in operation, the exterior noise would meet the City's Article 9: *Noise Control Ordinance*, primarily achieve the Section 9-9-3 Decibel Measurement Criteria A-Weighted measurement, Daytime 75 dB/Nighttime 70 dB or C-Weighted measurements, and Daytime 80 dB/Nighttime 75 dB measurement. Considering the strategic planning of the utility courtyard and all exterior noise-generating equipment, Maxeon does not anticipate noise to propagate beyond the Project site boundaries at levels that would exceed the ordinance limits. However, this would be verified during detailed design by a qualified sound-control engineer and site-specific sound model.

Based on Mesa del Sol's development plans, additional residential and/or commercial structures may be constructed within the development after commencement of operation of the Maxeon facility. The Project site is approximately 1.25 miles from the nearest existing noise receptors (i.e., existing residential areas). Mesa del Sol planning documents indicate that future development plans may result in construction of occupied structures closer to the Maxeon facility than the existing residential areas; such construction could result in noise receptors being closer to the Maxeon facility than the existing residential areas. In this case, Maxeon would conduct assessment of planned future construction to evaluate potential for noise impacts on offsite receptors and would assess conformance of facility operations to noise standards for exposure of offsite receptors.

If any noise source (e.g., scrubber fan, generator) is determined to exceed the noise control ordinance, then engineered sound-mitigation strategies (e.g., fan speeds, mufflers, acoustic insulation) would be applied.

To comply with the U.S. Department of Labor's Occupational Safety and Health Administration's (OSHA) noise-safety requirements for factory workers under 29 CFR 1910, Maxeon would implement engineering controls and administrative measures to maintain noise levels within the permissible exposure limits (PELs) of 90 dBs over an 8-hour workday. This includes the use of personal protective equipment (e.g., hearing protection), regular noise monitoring, employee training, and medical surveillance to ensure a safe and healthy working environment for all workers in the facility.

Due to controls that would be implemented during construction (i.e., time limits) and the nature of the area surrounding the Project, and because noise levels would comply with local noise ordinances during operations, impacts from noise as a result of the Project would not be significant.

3.6 Transportation

The Project site would be accessed via University Boulevard Southeast, which runs primarily from the north through the Mesa del Sol community (**Figure 2** and **Figure 3**). University Boulevard is a planned, paved, two-lane City of Albuquerque road that would connect Phases 1, 2, and 3 of the Mesa del Sol master-planned community to the existing Mesa del Sol mixed-development community. Additional road work is planned to connect the existing, improved University Boulevard to the proposed stretch of University Boulevard that would connect the Maxeon facility to the Mesa del Sol community. Anticipated construction activities at the Project site include 800 personnel driving to the Project site each day over two shifts and an average of 20–25 deliveries related to construction per day.

The Project would require visitor and service Cell Fab entrances, a MODCO employee and service entrance, facility roads, logistics shipping, receiving and container yard, approximately 1,000 parking spaces, and fire-access roads and loops around the factories. During operations, raw materials for the Project would be trucked to the Project site, requiring approximately 180 inbound trucks per week (i.e., approximately 26 incoming trucks per day). Outgoing product shipping would require approximately 200 weekly truck trips (i.e., approximately 29 outgoing trucks per day) to deliver the solar panels to Maxeon's customers. University Boulevard and the nearby local roadways do not have high traffic volumes. A traffic study has recently been completed for the Mesa del Sol Master Plan (Mesa del Sol 2005, 2022) that assesses impacts of anticipated traffic patterns and volumes for the Master Plan, including this Project. The planned traffic-related improvements would fully meet the transportation needs of the Project. Currently, approximately 255 vehicles per hour travel southbound into Mesa del Sol, and approximately 172 vehicles per hour travel northbound out of Mesa del Sol. As such, the Project would only lead to an incremental increase in overall traffic.

The extension of University Boulevard would support the Project and provide access to and from the Project site. Maxeon, Mesa del Sol, and the City of Albuquerque would continue to coordinate throughout the development and implementation of the Project to ensure that potential traffic-delay impacts are minimized. The Project, in conjunction with other planned Mesa del Sol developments within Phases 1–3, would lead to an incremental increase in overall traffic. Due to the design of the roadway systems and ongoing planning between Maxeon, Mesa del Sol, and the City of Albuquerque, transportation and traffic impacts as a result of the Project would not be significant.

3.7 Aesthetic and Visual Resources

The Project site currently consists of undeveloped desert land. Construction of the Project would result in permanent visual changes to the Project site, specifically, the existence of the proposed new buildings on what is currently vacant land. However, siting of the facility is in conformance with the Mesa del Sol Level A and Level B planning and zoning requirements (City of Albuquerque 2023c), and the new facility would have a wide, linear, landscaped utility easement along University Boulevard (**Figure 3**). This easement would have an appearance consistent with the existing desert shrubland vegetation and would buffer the viewshed between the Project and the nearby future Phase 2 of the Mesa del Sol planned residential development.

Temporary onsite construction lighting would be installed so that it faces the interior of the Project site, away from residential properties to the northwest. The MODCO building would be 30 feet tall, and the Cell Fab would be 44.6 feet tall. Operations at the new facility would result in moderate increases in nighttime lights in the vicinity. Operations at the proposed facility would be 24/7, and interior facility lighting would function full time. However, exterior lighting associated with facility operations would include both parking lot and exterior building-façade lighting, which would operate during hours of darkness. Permanent exterior parking-lot lighting would meet the Mesa del Sol Level A zoning and ordinance requirements (City of Albuquerque 2023c) such that no light pollution beyond the Project site property boundaries would occur.

Impacts on aesthetics and visual resources would be buffered by the design, which meets the requirements of the Mesa del Sol Level A and Level B Master Plans, adopted by the City's Development Review Board (Mesa del Sol 2005, 2022). These plans include screening and landscape requirements. The Project's landscape design strikes a balance between providing a pleasant, stable, and native environment suitable for human livability and stabilizing disturbed soils to the maximum extent possible. All plant material chosen for the landscaping would be appropriate species suitable for the xeric site conditions and microclimates in which they would be used (e.g., the use of phreatophytes for water retention areas). Specifically, the plant material for the parking lots, entries, and outdoor circulation areas would be native to the region and provide shade, seasonal interest, and a sense of place. The plant material for the perimeter and less-visible edges would entail a robust native-grass and seeding strategy that stabilizes the soils and provides ground cover, thus complying with the SWPPP.

Furthermore, the most industrial of facilities—the CUB, wastewater treatment, and bulk gas yards (**Figure 3**)—are by design located in the USC, screened from public view by the larger, surrounding factories and CAB. Finally, the exterior color palate of the buildings would be in tune with the natural desert landscape's sunrise and sunset lighting. Because of the incorporation of a visual buffer along University Boulevard, a site landscape plan that includes native vegetation and screening elements, and the naturalized color palate of the buildings, aesthetic and visual resources impacts as a result of the Project would not be significant.

3.8 Biological Resources and Threatened and Endangered Species

The Project is located within the Plains Mesa Sand Scrub community (**Appendix B**), and most of the Project area is shrubland, dominated by sand sage, with an understory of various grasses and forbs. Interspersed within the shrubland are some small, relatively shallow swales, dominated by big galleta, with lesser amounts of alkali sacaton. Plants observed during the protected species–assessment site visit conducted by Pathfinder Environmental biologists on September 5, 2023, are provided in **Appendix B**. No state-listed noxious weeds were observed in the Project area.

Wildlife observed in the Project area included Say's phoebe (*Sayornis saya*), Cassin's sparrow (*Peucaea cassinii*), curve-billed thrasher (*Toxostoma curvirostre*), and round-tailed ground squirrel (*Xerospermophilus tereticaudus*) (**Appendix B**). The area's Biological Survey Report (**Appendix B**) indicates that the Project area provides some habitat for large mammals, but the potential of their use of the Project site is low because of encroaching development from the north and west, as well as disturbance from Kirtland Air Force Base to the east. Coyotes (*Canis latrans*), foxes (*Vulpes vulpes*), and other mammals that range over large areas may cross the Project area periodically. The desert vegetation in the Project area is diverse and in relatively good condition; as such, it provides reasonably good-quality habitat for small mammals and ground-nesting birds.

The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (USFWS 2023), BISON-M (New Mexico Department of Game and Fish 2023), and New Mexico Rare Plants (New Mexico Rare Plants 2023) databases were consulted to identify plants and animals listed as threatened or endangered and habitats that could potentially occur in the Project area (**Appendix B**). Habitat requirements of all species listed by these websites were reviewed to determine if it was possible for any to occur in the Project area. In Bernalillo County, federally endangered species include two birds (northern aplomado falcon [*Falco femoralis septentrionalis*] and southwestern willow flycatcher [*Empidonax traillii extimus*]), one mammal (meadow jumping mouse [*Zapus hudsonius*]), and one fish (Rio Grande silvery minnow [*Hybognathus amaru*]). Federally listed threatened species include three birds (Mexican spotted owl [*Strix occidentalis lucida*], yellow-billed cuckoo [*Coccyzus americanus*], and brown pelican [*Pelecanus occidentalis*]) and one mammal (meadow jumping mouse).

State-listed endangered species include four birds, one mammal, and one fish, including least tern (*Sternula antillarum*), Aplomado falcon (also federally listed), southwestern willow flycatcher ((also federally listed), peregrine falcon (*Falco peregrinus*), meadow jumping mouse (also federally listed), and Rio Grande silvery minnow (*Hybognathus amarus*) (also federally listed).

State-listed threatened species include eight birds (broad-billed hummingbird [*Cynanthus latirostris*], white-eared hummingbird [*Basilinna leucotis*], neotropic cormorant [*Phalacrocorax brasilianus*], bald eagle [*Haliaeetus leucocephalus*], common black hawk [*Buteogallus anthracinus*], Bell's vireo [*Vireo bellii*], gray vireo [*Vireo vicinior*], and Baird's sparrow [*Ammodramus bairdii*]) and one mammal (spotted bat [*Euderma maculatum*].

Preferred habitat for these species includes riparian/aquatic (69 percent of listed species), cliff (15 percent of listed species), pine–oak woodland (8 percent of listed species), and grassland (8 percent of listed species). No suitable habitat adequate for long-term occupancy by any federally or state-protected species is present within the Project area, and no protected species were observed in the Project area nor the immediate surroundings during the biological surveys conducted for the Project site. The nearest critical habitat for a federally listed species (Rio Grande silvery minnow) is 4 miles to the west, 10 miles south–southwest (southwestern willow flycatcher), and 15 miles southeast (Mexican spotted owl) (see **Appendix B**, *Pathfinder's Report*, Figure 5). Lack of suitable habitat and absence of any observed individuals during the biological surveys suggest that none of these species are likely to be present in the Project area.

Because of the lack of suitable habitat and the absence of any observed individuals during the biological surveys, impacts of Project construction and operation on wildlife would not be significant. No related developments are planned in the Project area that DOE is aware of that would affect the habitat of Aplomado falcon, southwestern willow flycatcher, meadow jumping mouse, nor Rio Grande silvery minnow. Therefore, the indirect impacts of the Project on threatened and endangered species would not be significant.

Because of the lack of federally listed threatened and endangered species observations during the site visits (**Appendix B**), lack of suitable habitat adequate for long-term occupancy by any federally or state-protected species, and the surrounding development to the north and west, impacts on biological resources as a result of the Project would not be significant. An abundance of Plains Mesa Sand Scrub habitat would remain available to wildlife south, east, and west of the Project area, and the Maxeon landscaping plan (discussed above) would incorporate native vegetation in the easement along University Boulevard, within landscaped areas, and around each of the stormwater ponds.

3.9 Socioeconomics and Environmental Justice

3.9.1 Socioeconomics

U.S. Census Bureau data estimates that the City's population has decreased approximately 1 percent between 2021 and 2022, and the county as a whole has decreased by approximately 0.6 percent (U.S. Census Bureau 2023). The median age for Bernalillo County is 38. Median household income of Albuquerque is $56,366 (U.S. Census Bureau 2021), which is less than the County average of $59,723. The County poverty rate is estimated at 15.2 percent. The predominant ethnicities within the community are white (82.9 percent) and American Indian and Alaska Native (6.7 percent). Mean travel time to work is 22.6 minutes.

Approximately 91 percent of the Albuquerque population has a high-school graduate level of education, 37.4 percent have a Bachelor's degree or higher, and all are above the County averages in these categories. In the 2017–2021 period, Albuquerque had a 60.1-percent owner-occupied housing rate, and average mortgage costs were $1,413/month; average rent was $932/month.

The Project is located in the City, in Bernalillo County, New Mexico. As discussed in Section 1, *Purpose and Need*, the Project is located within the approximately 13,000-acre Mesa del Sol mixed-use planned-community development (Level A), and the Maxeon Site falls within Phase 1 (Level B) of the overall, three-phased development plan. In keeping with Mesa del Sol's ethos of *Smart, Secure, and Sustainable*, the Level B phase has dedicated a 500-acre special industrial park within the Mesa del Sol to encourage high-tech companies like Maxeon to build in the area. The Level B area comprises educational, residential, multifamily, commercial, technology park/offices, entertainment, retail, regional sports complex, and parks with walking and biking amenities.

The nearest hospital is approximately 7.5 miles north of the Project site, and the nearest school is approximately 4.25 miles northwest of the Project site. The proposed International School at Mesa del Sol would be located approximately 1.65 miles northwest of the Project site.

Beneficial socioeconomic impacts would occur from increased employment opportunities, tax-revenue generation, and direct and indirect spending in the local economy. Development of the Project would generate up to 1,400 full and part-time jobs during operation.

The New Mexico state income tax is 31 percent lower than the national average, and, per the City's 2019 Affordable Housing Implementation Ordinance, Albuquerque has prioritized residential housing for households of *low and moderate income*, defined as less than 80 percent of the area median income, as determined by the U.S. Department of Housing and Urban Development. Subsidized affordable housing developments ensure that households in these income categories pay no more that 30 percent of their income on housing costs. Additionally, as the Mesa del Sol community grows and develops more land in the proximity of the Project site, new housing and supporting infrastructure are anticipated. Residential housing development has already begun in the community with more planned for the future.

Based on the number of jobs that would be created during construction and operation of the Project and the availability of affordable housing and public services in the Albuquerque metro area, no significant adverse socioeconomic impacts are anticipated.

3.9.2 Environmental Justice

The LPO's review of EJ issues focused on Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, the National-Scale Air Toxics Assessment (NATA) cancer risk and respiratory hazard index (EPA 2023c), as defined in EPA's EJ screening tool, and on any site-specific population centers (e.g., schools, daycare centers) near the Project site.

Executive Order 12898 directs federal agencies to address environmental and human-health conditions in minority and low-income communities. The evaluation of EJ depends on determining whether high and adverse impacts from the Project would disproportionately affect minority or low-income populations in the affected community.

In accordance with EPA's EJ guidelines, minority populations should be identified when either: 1) the minority population of the affected area exceeds 50 percent; or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (EPA 2023b).

The ethnic composition of Albuquerque, Bernalillo County, and the State of New Mexico is presented below in **Table 4**. Minority populations comprise more than 50 percent of the population in Albuquerque and Bernalillo County; New Mexico is predominately Hispanic or Latino (50.2 percent). In Albuquerque, people of color comprise approximately 61 percent of the population.

The percentage of people in poverty is 2.4 percent less in Bernalillo County (15.2 percent) than in the rest of the state (17.6 percent; see **Table 5**). In the EPA's EJ screening tool (**Table 6**), however, the low-income population is 30 percent, which is lower than the state average of 40 percent (53rd percentile) and the United States average of 31 percent (54th percentile).

Table 5: Population, Ethnicity, and Poverty

Population, Ethnicity, and Poverty	Albuquerque	Bernalillo County	New Mexico
Total Population[1]	**564,559**	**676,444**	**2,117,522**
White, including Hispanic or Latino	65.6%	82.9%	81.1%
Black or African American	3.2%	3.7%	2.7%
American Indian and Alaska Native	4.8%	6.7%	11.2%
Asian	3.1%	3.1%	2.0%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.2%
Two or More Races	14.1%	3.4%	2.8%
Hispanic or Latino	49.8%	50.9%	50.2%
White, not Hispanic or Latino	37.4%	37.1%	35.7%
Poverty[2]	**16.2%**	**15.2%**	**17.6%**

Sources: [1] U.S. Census Bureau 2020; [2] U.S. Census Bureau 2021.

Table 6: Environmental Protection Agency Environmental Justice Screen Report

Environmental Justice Group	Value	State Average	Percentile in State	United States Average	Percentile in United States
NATA[1] Cancer Risk (lifetime risk per million)	20	18	34	25	<50th
NATA[1] Respiratory Hazard Index	0.3	0.21	69	0.31	<50th
People of Color Population	66%	62%	53	39%	76
Low-Income Population	30%	40%	36	31%	54

[1] Source: EPA 2023c.
Note: Selected Variables – Blockgroup: 350010040011, NEW MEXICO, EPA Region 6 (Population: 821) Area (sq. miles): 24.68.
NATA = National-Scale Air Toxics Assessment.

NATA cancer-risk and respiratory-hazard indices are tools for determining how local residents compare to other people in the State of New Mexico and the entire United States. For the NATA respiratory-hazard and cancer-risk indices (i.e., lifetime risk per million), the Project location is in an area that falls within less than the 50th percentile in the United States. Although these NATA percentiles are lower in comparison to the rest of the United States, the Project emissions would be reviewed by the state environmental agency in association with Maxeon's application for a Synthetic Minor Source Air Permit, as discussed above in Section 3.4, *Air Quality*. Permitted emission levels of criteria pollutants and hazardous air pollutants are considered to be protective of human health and the environment. Also, controls would be implemented during operation to minimize emissions and potential air quality impacts.

Based on the jobs that would be created during the construction period and the estimated 1,400 operational jobs that would be created, the Project would benefit the regional economy. No anticipated impacts would give rise to disproportionate impacts on minority or low-income populations in the affected area; therefore, EJ impacts would not be significant.

3.10 Health and Safety

The overall process for silicon PV cell fabrication involves converting silicon wafers into PV material using a series of wet chemical processes that etch and texture the wafer, applying coatings through chemical-vapor deposition, screen-printing conductive features with aluminum and silver pastes, conducting performance and quality testing, sorting, and packaging (see **Figure 7**). These processes require pressure, temperature, and cleanliness to be closely controlled in order to achieve the most consistent results and the highest performance.

Hazardous materials used in the PV cell fabrication process include toxic gases and hazardous materials listed in **Table 4**. OSHA sets enforceable PELs to protect workers from the health effects of exposure to hazardous substances. *PELs* are regulatory limits on the amount or concentration of a substance in workplace air. PELs may also contain a skin-exposure designation (OSHA 2017; NOAA 2020). The American Conference of Governmental Industrial Hygienists, a nongovernmental organization, has published Threshold Limit Values (TLVs) for hazardous materials. *TLVs* are the maximum average airborne concentrations of a hazardous material to which healthy adult workers can be exposed during an 8-hour workday and 40-hour workweek—over a working lifetime—without experiencing significant adverse health effects. OSHA's hazard communication standard (29 CFR 1910.1200, Appendix D) requires that safety data sheets for hazardous materials list the relevant OSHA PEL, as well as the American Conference of Governmental Industrial Hygienists TLV and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data

sheet. Maxeon would establish and implement an Occupational Safety Management Program with procedures for hazard communications, worker protection, and the control, monitoring, and reporting of occupational exposure.

Chemicals used in the solar panel–manufacturing process would be delivered to the facility via trucks utilizing a variety of packaging methods, including drums, supersacks, and pallets, that meet applicable U.S. Department of Transportation (DOT) requirements for transportation of hazardous materials. DOT has established material-specific requirements for transportation of hazardous materials (including toxic gases) that include container specifications and labeling requirements (49 CFR 105; 49 CFR 172). Toxic gases, including phosphine, SiH_4, and boron trichloride, would be transported in DOT-compliant cylinders and stored on site in containers and containment systems meeting applicable regulations and standards.

Toxic gases used at the facility, including phosphine, SiH_4, and boron trichloride, are classified as human health and safety hazards; SiH_4 and phosphine are pyrophoric compounds that may spontaneously ignite if exposed to air (OSHA 2021a, 2021b; CGA 2021a, 2021b). Boron trichloride is corrosive and may generate boric acid and hydrochloric acid if exposed to moisture (OSHA 2017; CGA 2021c). These compounds are also classified as acute inhalation hazards. The facility design would incorporate systems, procedures, and equipment for the management and control of toxic gases and prevention of releases; this would include standards published by the Compressed Gas Association and other applicable agencies, including use of compressed gas–containment cabinets, cylinder-valve protection, and standards for cylinder inlet and outlet connections, explosion-proof electrical (i.e., ventilating, lighting and material-handling) equipment, and corrosion-resistant piping systems. Maxeon would implement systems and procedures for monitoring and maintaining gas-handling equipment for the prevention detection of releases. Maxeon would develop and implement an SPCC Plan applicable to onsite storage and management of petroleum products. SPCC Plans are required for facilities storing more than 1,320 gallons of petroleum products on site. The SPCC Plan would be reviewed and updated periodically in accordance with applicable requirements. Maxeon would also update and maintain the Project site SWPPP for management and control of stormwater generated during Project operations, including operation and maintenance of stormwater-management infrastructure.

Maxeon would also develop and implement a Pollution Incident Prevention Plan (PIPP), anticipated to be in place by June 2024 (see **Appendix A**), which identifies applicable regulations and standards and establishes practices and procedures for the anticipated transportation, storage, and handling protocols for chemicals, gases, and other hazardous materials transported, stored, and used on site.

Controls, management practices and procedures, and mitigation measures would be outlined in the SPCC Plan, SWPPP, and PIPP and would follow applicable federal EPA, NMED, and local (i.e., the City) regulations and standards for hazardous-materials management, and proper infrastructure would be provided and maintained that meets the requirements of the site-specific PIPP, SPCC Plan, and SWPPP.

Standard best management practices and applicable federal, state, and local regulations and standards for construction and operation of the facility would be implemented to ensure the safety of workers and the public. This would include compliance with federal OSHA regulations (29 CFR 1910), OSHA Process Safety Management for Highly Hazardous Chemicals Standards (29 CFR 1910.119), and state regulations under the New Mexico Occupational Safety and Health Act. The OSHA Risk Management Program Standards apply to facilities that store more than threshold quantities of listed highly hazardous chemicals, including storage of more than

10,000 pounds of SiH_4 or more than 5,000 pounds of phosphine, phosphorous oxychloride, or boron trichloride.

EPA has established emergency-response reporting requirements for hazardous materials under the Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA Section 302 requires users of certain hazardous materials to notify their Local Emergency Planning Committee and State Emergency Response Commission about storage of more than threshold quantities of hazardous materials on site. EPA Section 302 establishes threshold-notification quantities of 500 pounds for NH_3, boron trichloride, phosphine, and phosphorus oxychloride, 100 pounds for hydrogen fluoride, and 1,000 pounds for hydrogen peroxide (EPA 2022). To ensure that first responders and the public are protected from exposure to potentially hazardous situations (e.g., toxic smoke or vapors) in the event of a fire or industrial accident, the local fire department would also be informed of potential hazards associated with the facility, facility construction, and layout information for the Project site.

EPCRA Section 304 establishes reporting thresholds for releases of hazardous materials to the environment. Facilities are required to report releases of more than 100 pounds of NH_3, boron trichloride, phosphine, phosphorus oxychloride, and hydrogen fluoride and more than 1,000 pounds for hydrogen peroxide. Maxeon would implement procedures for reporting storage of hazardous materials to the Local Emergency Planning Committee and State Emergency Response Commission and procedures for reporting any accidental releases in accordance with EPCRA and other applicable reporting requirements.

Based on Mesa del Sol's development plans, additional residential and/or commercial structures may be constructed within the development after commencement of operation of the Maxeon facility. The Project site is approximately 1.25 miles from the nearest existing structures (i.e., existing residential areas). Maxeon's air-permit application considers any and all build out of the Mesa del Sol Master Plan, including the potential for public exposure to toxic gas releases, and ensures that Maxeon facility operations conform with standards that the Albuquerque Bernalillo County Air Quality Program established for exposure of offsite receptors, locating receptors at least 1,000 feet away from the Maxeon property line, in accordance with General Manufacturing with Cleanroom Use, as per the City's zoning code.

Measures to address occupational and public health and safety, would be outlined in the Project's Occupational Safety Management Plan, SPCC Plan, SWPPP, PIPP, and other site-specific plans, policies, and procedures. These measures would include best management practices for occupational and public health and safety, policies and procedures for compliance with federal, state, and local regulations and standards, properly designed and maintained areas that meet applicable codes and standards to prevent, control, and contain chemical spills, and plans and procedures for preventing chemical spills and potential mishandling of hazardous materials. Because of these measures, impacts on the health and safety of workers and the surrounding public from Project construction and operations would not be significant.

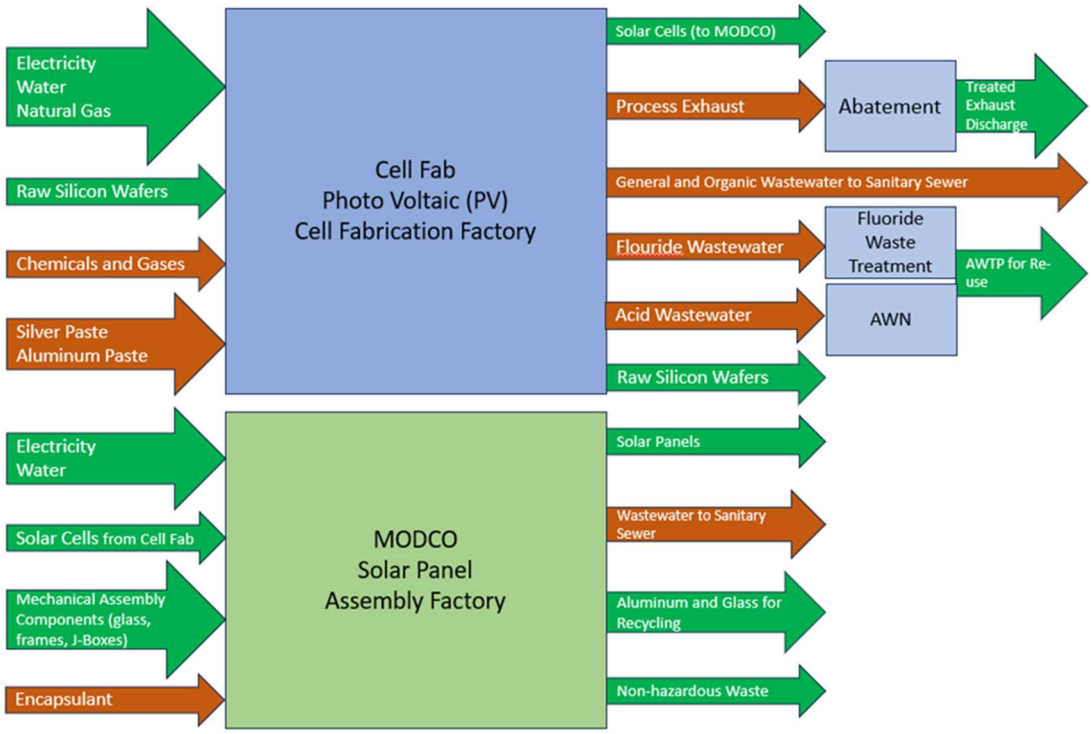
3.11 Waste Management

All solid waste generated during the construction phase of the Project would be managed on site and transported off site in accordance with applicable federal, state, and local regulations. During construction, Project-related waste streams would consist of waste generated during general construction activities, including wood, plastics, glass, metal scrap (i.e., steel, aluminum), surplus concrete, and other packaging materials. These waste streams would be collected, diverted, and sorted for recycling or disposed of at an approved solid-waste landfill, in accordance with the construction contractor's waste-management plan. In addition, the Project's construction contractors would be required to establish and implement an SPCC plan and

SWPPP (**Appendix A**) to address prevention and control of releases of wastes generated from construction activities and appropriately dispose of any liquid waste and spills that resulted from construction equipment or activities. The Project construction contractor would also be required to appropriately manage human waste generated from construction activities.

The general process and waste management flow for Project operations are described on **Figure 8**.

Figure 8: Process Flow Diagram



During testing and operations, manufacturing-process exhaust would be treated using abatement systems and wet scrubbers to remove contaminants (discussed in Section 3.4, *Air Quality*) prior to being released into the atmosphere. Wastewater from these systems would be drained to the AWN system or discharged directly to the sanitary sewer system, depending on the process. Ammonia-scrubbed exhaust rinse water would be treated and sent to the sanitary sewer system, and acid-scrubber rinse water would be sent to the AWN system for treatment prior to discharge. In accordance with its NPDES permit conditions and established sanitary wastewater– and process wastewater–pretreatment standards for compliance with applicable requirements, Maxeon would implement procedures for wastewater-discharge sampling and analysis, reporting, and recordkeeping.

Three types of wastewater would be generated during operations: (1) acid (estimated 449 gallons per minute [gpm]); (2) fluoride (estimated 465 gpm); and (3) NH_3 (estimated 123 gpm). Process rinsewater, general acids and bases, scrubber- and abatement-blowdown water, cooling-tower blowdown, and wastewater from the reverse-osmosis deionization system would be treated in the AWN system, where they would be pH-neutralized prior to discharging to ABCWUA's AWTP, where the water would be further treated to remove total dissolved solids and other contaminants, and then reused as industrial water for manufacturing clients, including Maxeon. All wastewater generated from Project operations would be treated on site to meet

ABCWUA/AWTP pretreatment requirements (ABCWUA 2021), and the Project, when operational, would fall under an Industrial Pretreatment and Discharge Permit with NMED (**Appendix A**).

Wastewater streams containing fluoride (estimated 465 gpm, as stated above) would be treated separately in the FWTP system, which would precipitate the fluoride into calcium-fluoride sludge. The calcium-fluoride sludge, which would not exceed 23,000 kilograms (kg)/day, would be shipped off site for disposal by a licensed hazardous-waste hauler. The treated fluoride wastewater would be discharged to the AWTP.

Nonhazardous wastewater and high organics–content wastewater would be pretreated on site (**Figure 8**), in accordance with ABCWUA's intake water pretreatment requirements, and discharged to the sanitary sewer. The discharge volumes and concentrations would not exceed ABCWUA's intake-water requirements, which are 22.7 milligrams per liter (mg/l) per day for fluoride and 16,543 mg/l per day for NH_3-containing wastewater. For acid wastewater, ABCWUA's pH limits are between 5 and 12. To monitor wastewater discharges for compliance with applicable requirements, Maxeon would implement procedures for wastewater-discharge sampling and analysis, recordkeeping, and reporting.

Regarding hazardous waste, the facility is anticipated to be a Large-Quantity Generator, based on the initial estimates of hazardous waste generation of 1.1 million kg/year. Maxeon is in the process of obtaining an EPA ID Resource Conservation and Recovery Act hazardous waste–generator ID number (**Appendix A**) and would comply with all applicable hazardous-waste generation, management, and accumulation requirements (see Section 3.4, *Air Quality*). The hazardous waste would be transported off site by a licensed hazardous-waste hauler to a licensed treatment, storage, and disposal facility.

For inadvertent spills of petroleum products, the Project would comply with existing regulatory requirements regarding remediation of spills and follow guidelines outlined in the SPCC plan to reduce the potential for petroleum products to reach offsite water bodies.

Controlled solid and liquid waste would be transferred off site throughout the Project lifetime.

Based on the design measurements of the waste-management and wastewater-treatment plant, the recycling practices for the exhaust and solid waste, the control measures (including periodic sampling of wastewater discharges), acid waste–system monitoring for pH, fluoride, and chemical oxygen demand, and corrective action measures that would be in place to ensure that discharged wastewater met the requirements of the permit, Project-related impacts on waste management during construction and operations would not be significant.

3.12 Land Use

The Project site is in the Mesa del Sol mixed-use master-planned community in Albuquerque, New Mexico (**Figure 2**). Planning and zoning requirements for the Mesa del Sol development applicable to the Maxeon Project are included in the *Mesa del Sol Community Master Plan* (Mesa del Sol 2005, 2022). The siting of the facility conforms to Mesa del Sol Level A and Level B planning and zoning requirements, including Project visual impacts, exterior lighting, stormwater management and retention, and would be consistent with planning and zoning requirements; no local government land-use or site-development permits would be required for the Project (Mesa del Sol 2005). Based on conformance of the Project to planning and zoning requirements, impacts on land use would not be significant.

3.13 Cumulative Impacts

Cumulative impacts are potential effects on the environment from the incremental impact of the Project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1 (g)). Projects were identified through a review of active project lists and planning documents in Bernalillo County from the Bernalillo County Planning Department, the Mesa del Sol planned-community development, and New Mexico Department of Transportation (NMDOT), with additional information and site studies provided by Maxeon (**Appendix B**). The review identified the following current and reasonably foreseeable future projects.

- **Mesa del Sol Utility Corridor Construction**: Mesa del Sol would provide utility connections to the Project site, including natural gas, electricity, communications, process water, wastewater, and sanitary sewage connections. Preparation of the offsite utility corridor and rough grading would begin in February 2024, and construction of the water and sanitary sewer utilities is planned to begin in Q2 2024. Construction of the natural gas, electricity, and data-fiber utility lines is also planned to begin in Q2 2024 and conclude in early 2025.
- **I-25 Mesa del Sol Boulevard/Bobby Foster Road Interchange Study**: NMDOT is conducting a Phase 1-A/B Study of I-25 between the Rio Grande Bridges and Sunport Boulevard on the southern side of Albuquerque. The goal of the study is to identify, evaluate, and determine overall future improvements needed for the I-25 corridor in the study area to address current congestion and enhance capacity, safety, and access along this segment of I-25. The study would develop and evaluate alternatives and preliminary designs for transportation-network improvements, including, but not limited to, new interchanges at Bobby Foster Road and Mesa del Sol Boulevard to accommodate current and future development in the Project area. The initial and detailed phase for the evaluation of alternatives are complete.
- **Mesa del Sol Phase 1 Development**: Expansion studies for the Phase 1 portion of the Mesa del Sol community are currently underway. An international charter school, hotel, stadium, and supporting businesses and infrastructure are being planned.
- **NM 500 Rio Bravo Bridge Replacement**: A study was completed under CN A301000 in October 2021. NMDOT is currently working on design plans to replace the east- and westbound bridges on New Mexico 500 (i.e., Rio Bravo Boulevard) across the Rio Grande in the South Valley. The purpose of this project is to address structural deficiencies, reduce congestion, and improve multi-modal transportation-system connectivity within the project limits. Construction is anticipated to begin in spring 2025.
- **I-25 Improved – Comanche to Montgomery**: NMDOT is evaluating transportation improvements to the I-25 corridor in Albuquerque, between Comanche Road and Montgomery Boulevard, including the freeway, frontage roads, and interchanges. This project would improve safety, mobility, and reliability of the transportation network, keeping Albuquerque moving for years to come. Final project design and construction are anticipated to begin in 2024.
- **I-40 Corridor Study, Arizona to Albuquerque–Bernalillo Segment**: NMDOT, in cooperation with the Federal Highway Administration, is conducting a corridor study on I-40, between Mile Posts 0 and 150. The purpose of the Study is to identify corridor needs, develop and evaluate alternatives, and develop a Highway Operational Improvement Plan to address existing and future operation and safety needs for this section of I-40 and its

adjacent frontage roads. This project is in the public comment period, and the evaluation of alternative is anticipated to be completed in 2024.

The LPO reviewed the identified projects in the region to determine the resources that may be subject to a cumulative impact. The reviewed projects focused on the resources affected by the Project and identified resources that may be affected by both the Project and other projects in the region. Based on this review, the following resources were evaluated for cumulative impacts.

- GHG Emissions and Climate Change
- Socioeconomics and EJ
- Transportation

The Project, when considered together with the identified projects in the region, does not have the potential to result in significant cumulative impacts on other resources due to the geographic location and separation of the projects, the disturbed nature of the project sites, and/or the lack of construction or operational overlap that would result in an incremental impact on a particular resource.

3.13.1 Greenhouse Gas Emissions and Climate Change

The current science and study of the earth's climate now shows with 95-percent certainty that human activity is the dominant cause of observed global warming since the mid-twentieth century. Since the beginning of the industrial era, circa 1750, human activities have increased the concentration of GHGs (primarily CO_2, NO_X, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere. The rising global temperatures have been accompanied by changes in weather and climate (e.g., changes in rainfall that result in more floods, droughts, or intense rain, rising sea levels, Arctic Sea ice decline, more frequent and severe heat waves) (IPCC 2013). It is now well established that rising atmospheric GHG-emission concentrations are significantly affecting Earth's climate (CEQ 2016, 2023).

GHG emissions associated with the construction of the Project would be minimal compared to the CO_2 offset resulting from use of the PV panels from the proposed manufacturing facility. As discussed in Section 2, *Description of the Proposed Action*, the new manufacturing facility would be used to build PV panels designed for solar-energy generation.

The magnitude of potential annual reductions of fossil-fuel use would depend on the number of solar panels manufactured per year. At full capacity, the Project would produce 3.7 GWs of PV cells and 3.5 GW of modules every year, which corresponds to about 5.8 million solar panels annually. The 3.5-GW capacity that each year of production would displace is anticipated to be an estimated 2 million metric tons of CO_2 in the first year after fielding the PV, and 45 million tons of CO_2 would be displaced over the 25-year warranty period of the panels.

The benefits associated with reducing CO_2 emissions at the Maxeon facility would support a reduction in GHG concentrations and reduce the associated climate-change impacts (e.g., increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of extreme weather events, rising sea levels). As such, adverse cumulative impacts related to GHG emissions and climate change are not anticipated.

3.13.2 Socioeconomics and Environmental Justice

Construction and operation of the Project, along with the construction and operation of the identified projects in the region (Section 3.12, *Cumulative Impacts*), would result in an increase

in both temporary construction workers and long-term employment. The increase in short-term and long-term jobs in the region would result in a beneficial socioeconomic impact.

Because the Project and the other projects in the region would be subject to local regional planning and coordination with the Mesa del Sol master-planned community, the City, and Bernalillo County, significant cumulative impacts on the existing infrastructure and services (e.g., roads, schools, fire departments, police force) resulting from any population migration to the Project area are not anticipated.

The proportion of the population in Bernalillo County that is minority or low-income is not significantly greater than the neighboring communities or state overall. Therefore, no cumulative impacts on nearby low-income or minority communities are anticipated.

3.13.3 Transportation

As discussed in Section 3.6, *Transportation*, the Project would primarily affect University Boulevard Southeast, which runs primarily from the north through the Mesa del Sol community. University Boulevard and the nearby local roadways do not have high traffic volumes. A traffic study was recently completed for the Mesa del Sol Master Plan (Mesa del Sol 2005, 2022), which anticipated traffic patterns and volumes for the Master Plan, including this Project. The planned traffic-related improvements would fully meet the needs of the Project. Maxeon would coordinate throughout the development and implementation of the Project to ensure that potential traffic-delay impacts would be minimized. The Project, in conjunction with the identified projects in the region, would lead to an incremental increase in overall traffic; however, no significant adverse cumulative effects on the region's overall transportation network are anticipated.

4. FINDING

Based on this EA, DOE has determined that providing a federal loan guarantee to Maxeon to construct and operate a new PV solar cell–fabrication and panel-assembly facility along University Boulevard Southeast in Albuquerque, New Mexico, would not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

This Finding of No Significant Impact should not be construed as a final decision about the issuance of a loan guarantee.

TODD STRIBLEY

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2/26/2024

TODD STRIBLEY
NEPA Compliance Officer
DOE Loan Programs Office

Date

5. LIST OF AGENCIES CONTACTED

- USFWS
- NMDOT
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Geological Survey
- Federal Emergency Management Agency
- U.S. Census Bureau
- EPA
- New Mexico SHPO

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Appendix A **PERMITS AND APPROVALS**

Appendix A: List of Environmental Permits & Approvals

Title of Permit / Agency	Anticipated Submittal Date*	Anticipated Receipt Date*
Synthetic Minor Source Air Permit / Albuquerque Environmental Health Department (EHD)	November 28, 2023	March 1, 2024
Fugitive Dust Control / Albuquerque-Bernalillo County Air Quality Program	June 5, 2024	June 26, 2024
NPDES General Permit for Stormwater Discharges from Construction Activities / EPA, Region 6	June 3, 2024	June 17, 2024
Storm Water Pollution Prevention Plan (SWPPP) and Sediment & Erosion Control Plan / NMED	June 3, 2024	June 17, 2024
Industrial Pretreatment and Discharge Permit / EPA, Region 6	May 15, 2024	June 15, 2024
Hazardous Waste Generator EPA ID Number / NMED	May 15, 2024	June 15, 2024
Spill Prevention Control and Countermeasure (SPCC) Plan** / NMED	June, 2024	July, 2024
Pollution Incident Prevention Plan (PIPP)**	June, 2024	July, 2024

*Dates are subject to change during the final site engineering phase and coordination with the general contractor.

**SPCC and PIPP Plans to be aligned with final engineering Issued-For-Construction drawings.

Appendix B **SITE STUDIES, AGENCY AND TRIBAL CORRESPONDENCE**

Appendix B: Site Studies, Agency & Tribal Correspondence

Organization	Contact Date(s)	Summary of Contact
Pathfinder Environmental, LLC	September 26, 2023	Mesa del Sol Biological Survey Report
New Mexico Environment Department	August 25, 2023	Intent to Prepare an Environmental Assessment
	January 10, 2024	EA with the draft FONSI
	February 12, 2024	NMED Response: identified technical corrections to the EA with the draft FONSI and provided two suggested considerations for project permitting.
Apache Tribe of Oklahoma*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI
Comanche Nation of Oklahoma*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI
Navajo Nation of Arizona*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI
Pueblo of Isleta, New Mexico*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI

Pueblo of Laguna, New Mexico*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI
Pueblo of Sandia, New Mexico*	August 25, 2023	Notification of Federal Project per NHPA Section 106
	November 15, 2023	NHPA Section 106 Cultural Survey Results Notification
	January 10, 2024	EA with the draft FONSI
New Mexico Historic Preservation Division	November 8, 2023	Section 106 Consultation
	November 30, 2023	SHPO Concurrence with Determination of Eligibility & Finding of Effect

*An individual letter was submitted to each Indian Tribe. To reduce the file size and the overall number of pages, the letters to the Apache Tribe is included as an example, and all responses are included.

BIOLOGICAL SURVEY REPORT

for the proposed

Maxeon Large Solar Manufacturing Facility

Albuquerque, NM

September 2023

Prepared for

Maxeon Solar Technologies, Ltd.
8 Marina Boulevard
#05-02 Marina Bay Financial Centre
018981, Singapore

Prepared by

PATHFINDER Environmental

Pathfinder Environmental, LLC. ♦ 1800 Old Pecos Trail, Suite E. ♦ Santa Fe, New Mexico 87505

Table of Contents

1.0 INTRODUCTION

Pathfinder Environmental, LLC (Pathfinder) was hired by Maxeon Solar Technologies, Ltd. (Maxeon) to prepare this Biological Survey Report (BSR) for the proposed Maxeon Large Solar Manufacturing Facility (Project) located in Mesa del Sol on the south side of Albuquerque, New Mexico.

1.1 Purpose and Goals

The purpose of this BSR is to document natural resources and existing site conditions in order to identify potential environmental constraints that may affect the development of the project. Additionally, the goal of this report is to provide guidance on regulatory issues that could influence site development in accordance with development planning and permitting in Bernalillo County. The environmental resources and constraints that are addressed include:

- Flora and fauna
- Soils
- Federal and State Listed Threatened and Endangered (T&E) Species
- Aquatic Resources/Wetlands/Waters of the U.S. (WOTUS)
- Floodplains
- Migratory birds and other sensitive species
- State-listed Noxious weeds
- Other potential biological constraints.

1.2 Project Description and Site Location

Maxeon proposes to construct the Project at the Mesa Del Sol mixed-use master planned community in Albuquerque, New Mexico. The new facility will consist of a Cell Fab (solar cell manufacturing factory) and MODCO (Module Company), a solar panel assembly factory. Each factory unit will include a manufacturing area, manufacturing support space, warehousing, and office space. The Cell Fab and MODCO buildings will have a new core and shell suitable for the manufacturing processes.

The new facilities will require Cell Fab support facilities that includes a Chiller Plant with Cooling Towers, a Compressed Dry Air (CDA) Building, a Waste Treatment Facility, Fluoride Waste Treatment Facility, Industrial Water Tank and Pump House, a Chemical Storage Building, Bulk Gas Yard, Silane Gas Pad, Hazardous Waste Storage Building, and Emergency/Back-up Generators.

The Site will require a main entrance off of University Boulevard and 2 service entrances and exits, facility roads, logistics shipping, receiving and container yard, approximately 1,600 parking spaces, fire access roads/loops around the factories, and 3 site stormwater management/retention ponds. During construction, typical building construction materials will be used, including foundation pilings, steel, poured and pre-fabricated concrete, crushed stone, lighting fixtures, roof deck, rubber membrane roofing, insulation, electrical switchgear and transformers, HVAC equipment, flooring products, and common fixtures and furnishings used to fit out offices, cafeterias, and restrooms.

The project site is in Mesa del Sol at the southeast corner of the Albuquerque metropolitan area, one mile southwest of Albuquerque Studios and three miles east of Interstate 25. The southwest corner of the project area is adjacent to the boundary of Isleta Pueblo. The project area is an approximately

750 x 1000-yard rectangle encompassing 160 acres at an elevation of 5,280 ft above mean sea level. Photographs identified on Figure 1 of the project area are in Appendix A.

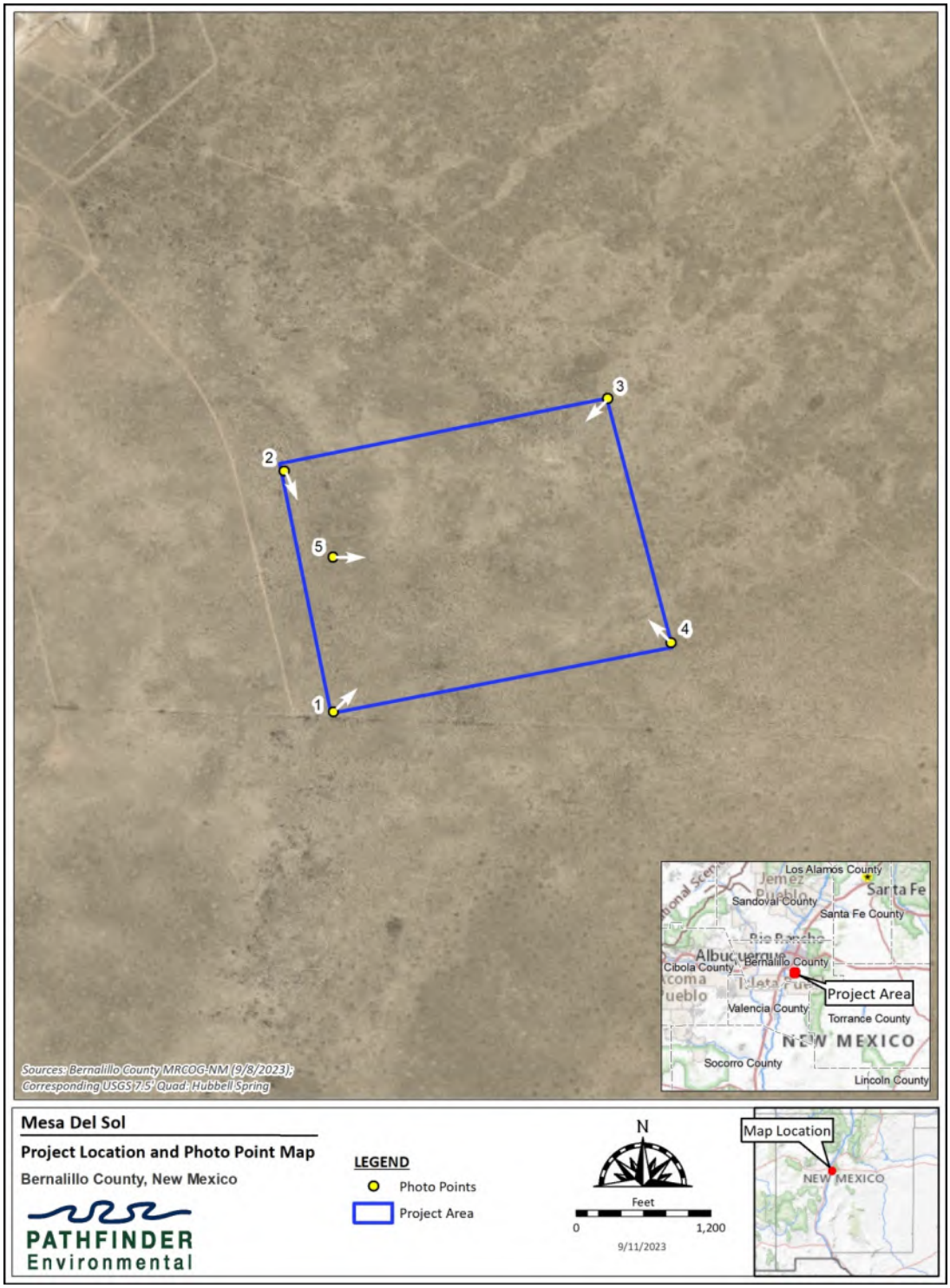

FIGURE 1. MAXEON LARGE SOLAR MANUFACTURING FACILITY PROJECT AREA, ALBUQUERQUE, NM. LOCATIONS AND DIRECTIONS OF PHOTOGRAPHS (APPENDIX A) ARE SHOWN.

2.0 METHODOLOGY

Prior to the site visit, Pathfinder performed a desktop review to gather background information about the environmental setting of the project area. Publicly available data sources that were queried included:

- U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPaC) website
- USFWS Critical Habitat Portal
- N.M. Department of Game and Fish (NMDGF) Biological Information System of New Mexico (BISON-M) website
- USFWS National Wetland Inventory (NWI) data
- Google Earth aerial imagery
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panels online
- 19.21.2.8 N.M. Administrative Code (NMAC) NM State Endangered Species list
- New Mexico Rare Plant Technical Council, New Mexico Rare Plants website
- New Mexico State-listed Noxious Weed List
- U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Web Soil Survey
- U.S. Geological Survey, National Water Information System

Following the desktop review, reconnaissance of the site was conducted on September 5, 2023, to verify results of the review and identify potential impacts to these resources and constraints to development. The field reconnaissance focused on identifying vegetation and vegetation communities, habitat suitable for wildlife, and habitat that could support T&E and other sensitive species.

3.0 ENVIRONMENTAL SETTING

3.1 Vegetation

The vegetation type is Plains Mesa Sand Scrub, as described by Dick-Peddie. Most of the project area is a shrubland dominated by sand sage (*Artemisia filifolia*) with an understory of various grasses and forbs. Interspersed within the shrubland are some small, relatively shallow swales, dominated by big galleta (*Hilaria rigida*) with lesser amounts of alkali sacaton (*Sporobolus airoides*). Plants observed are listed in Appendix B.

3.2 Soils

The project area is comprised of Bluepoint Loamy Sand (42%), Maderuz Wink Sandy Loam (22%) and Pajarito Sandy Loam (36%) (NRCS 2023). All are well-drained, on slopes less than 10%, have rapid permeability, low runoff, and little to no potential for flooding. A soil map is included in Appendix C of this report.

3.3 Aquatic Resources and Floodplains

Aquatic resources include both jurisdictional and non-jurisdictional wetlands and other regulated Waters of the U.S. (WOTUS) such as streams/rivers, ponds/lakes, ditches and other surface water features. The USFWS NWI dataset was reviewed for the possible presence of wetlands and streams within the project area. Aerial imagery of Google Earth was used to locate water features not depicted in the NWI dataset. **No wetlands are identified in the project area in the NWI dataset or in aerial imagery. No wetlands or drainages were observed in the project area during the site visit. The nearest WOTUS to the project area is a drainage 2 miles east on Kirtland Air Force Base. (Figure 2).**

Pathfinder reviewed designated Federal Emergency Management Agency (FEMA) floodplains in the vicinity of the project area by examining the Flood Insurance Rate Map (FIRM), Panel No. 35001C0555H (effective 8/16/2012) (Figure 3). The project area is within Zone X, an area with essentially no flood hazard. Pathfinder also reviewed the locations of groundwater monitoring wells in the vicinity of the project area (USGS 2022). None are present.

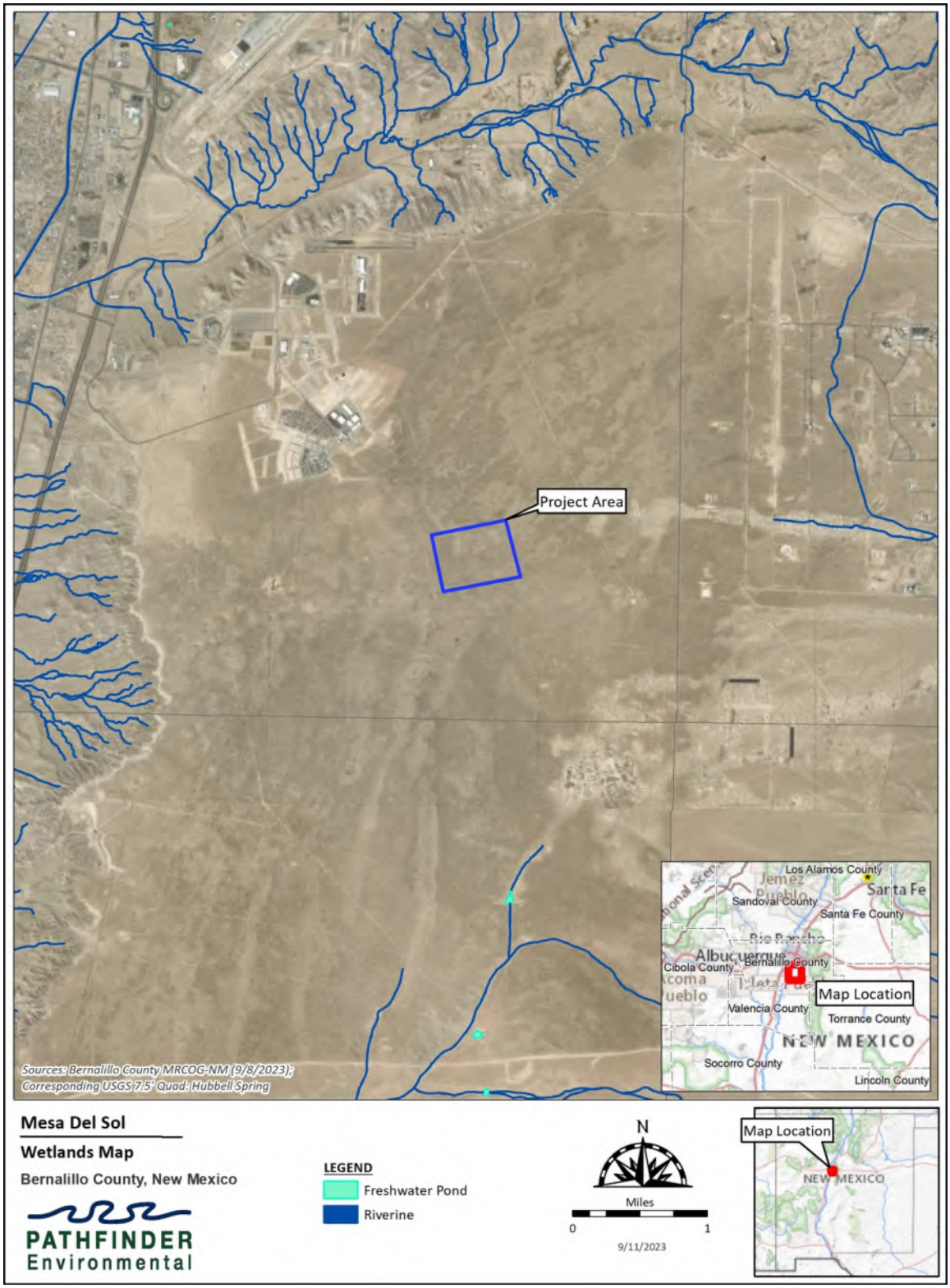

FIGURE 2. WETLANDS AND WATER COURSES IN AND AROUND THE PROPOSED MAXEON LARGE SOLAR MANUFACTURING FACILITY, ALBUQUERQUE, NM. SOURCE: US FISH AND WILDLIFE SERVICE WETLANDS INVENTORY MAP.

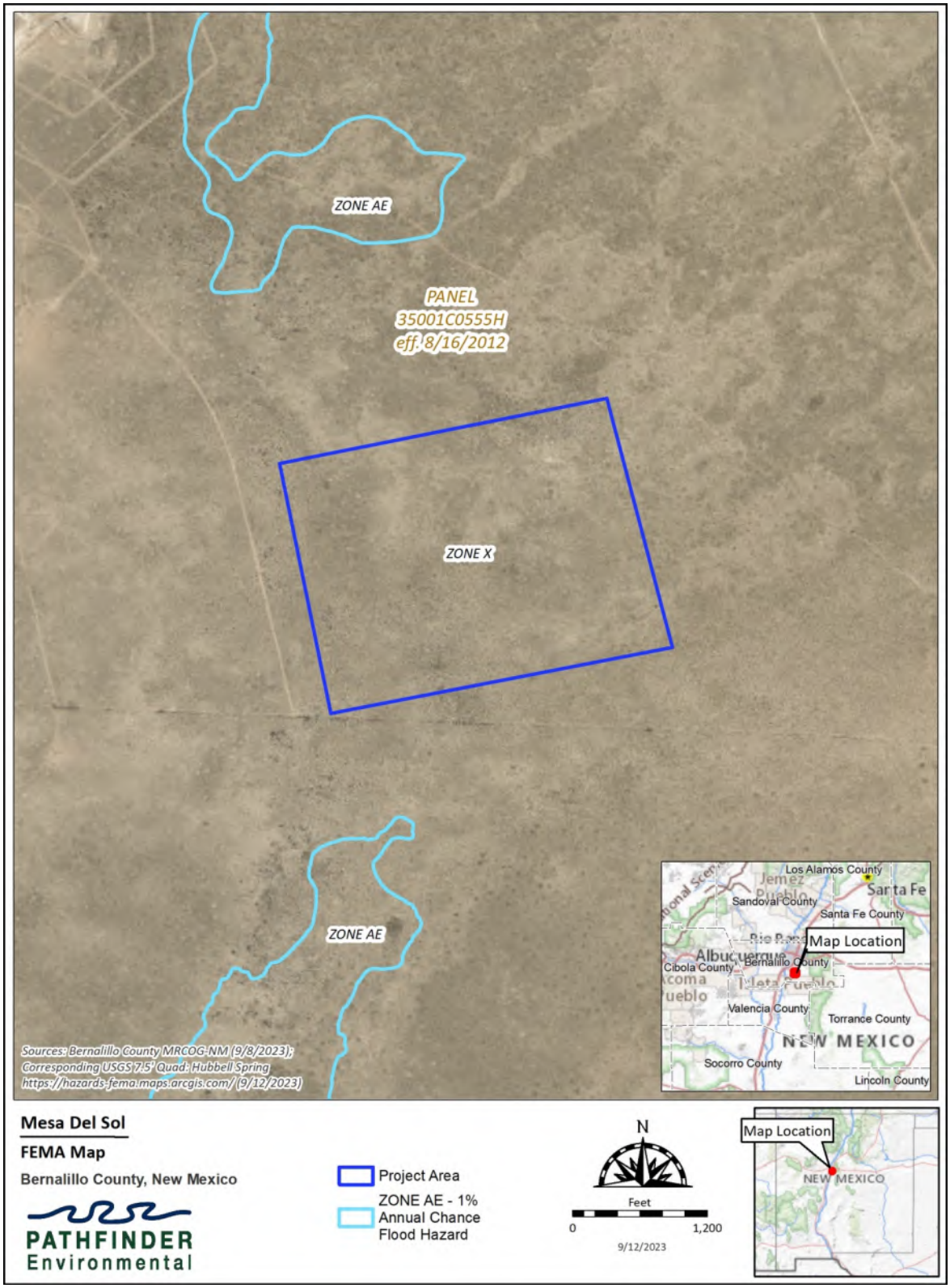

FIGURE 3. FEMA FLOOD INSURANCE RATE MAP SHOWING FLOODPLAINS IN THE VICINITY OF THE PROPOSED MAXEON LARGE SOLAR MANUFACTURING FACILITY, ALBUQUERQUE, NM.

3.4 Wildlife Communities

Wildlife observed in the project area included Say's Phoebe (*Sayornis saya*), Cassin's Sparrow (*Peucaea cassinii*), Curve-billed Thrasher (*Toxostoma curvirostre*), and a round-tailed ground squirrel (*Xerospermophilus tereticaudus*) (Appendix B). The project area provides some habitat for large mammals but the potential of their use is low because of encroaching development from the north and west as well as disturbance from Kirtland Air Force Base to the east. Coyotes (*Canis latrans*), foxes (*Vulpes vulpes*), and perhaps other mammals that range over large areas may cross the project area periodically. The desert vegetation in the project area is diverse and in relatively good condition. As such, it provides reasonably good quality habitat for small mammals and ground-nesting birds.

3.5 Federal and State Listed T&E Species

The IPaC, BISON-M and New Mexico Rare Plants websites were consulted to identify plants and animals listed as threatened or endangered and habitats that could potentially occur in the project area (Appendix D). Habitat requirements of all species listed by these websites were reviewed to determine if it was possible for any to occur in the project area. In Bernalillo County, federally endangered species include 2 birds (Aplomado Falcon, and Willow Flycatcher), one mammal (Meadow Jumping Mouse), and 1 fish (Rio Grande Silvery Minnow). Federally-listed threatened species include two birds (Mexican Spotted Owl, Yellow-billed Cuckoo). State-listed endangered species include four birds, one mammal, and one fish. State-listed threatened species include ten birds and one mammal. Preferred habitat for these species includes riparian/aquatic (69% of species), cliff (15%), pine-oak woodland (8%), and grassland (8%). The nearest critical habitat for a federally-listed species is 4 miles west (Rio Grande Silvery Minnow), 10 miles south-southwest (Southwestern Willow Flycatcher), and 15 miles southeast (Mexican Spotted Owl) (see Figure 5). Lack of habitat and absence of any individuals during the biological survey suggest that none of these species are likely to be present in the project area.

Thus, no suitable habitat adequate for long-term occupancy by any state or federally protected species is present within the project area. The nearest designated or proposed critical habitat for federally protected species is 4 miles from the proposed project area. No protected species were observed in the project area or immediate surroundings during the biological survey.

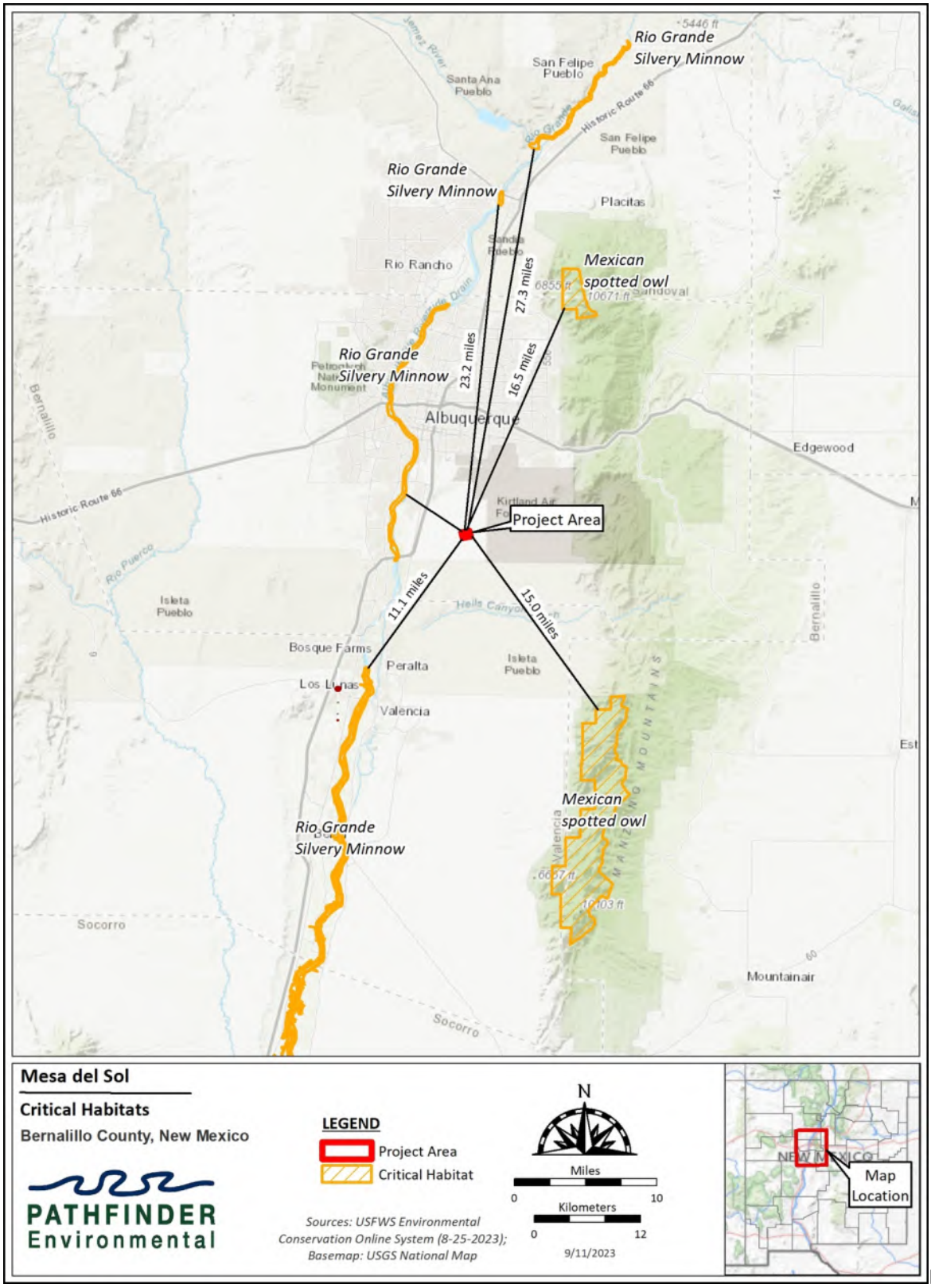

FIGURE 5. DISTANCE FROM THE MAXEON LARGE SOLAR MANUFACTURING FACILITY, ALBUQUERQUE, NM, TO THE NEAREST CRITICAL HABITAT FOR ENDANGERED SPECIES.

4.0 SUMMARY OF IMPACTS

4.1 Vegetation

Much of the vegetation in the project area will be removed when this project is developed. Impacts are not expected to imperil or substantially reduce the extent of the Plains-Mesa Sand Scrub community and the species found in it. No imperiled or sensitive vegetation communities are present.

No State-listed noxious weeds were observed in the project area during the biological survey.

4.2 Aquatic Resources

No WOTUS or ground water wells are in or near the project area, so aquatic resources will not be affected by the project.

4.3 Wildlife

The project will have little adverse impact on wildlife. An abundance of Plains Mesa Sand Scrub habitat will remain available to wildlife south, east and west of the project area and throughout the State of New Mexico.

4.4 Federally Listed T&E Species

Federally listed T&E species are not expected to occur in the project area and were not observed during any site visit. The nearest critical habitat is designated for the Silvery Minnow in the Rio Grande, four miles west of the project area. All species listed in Appendix D either occur in habitats that were not present on the site or would be transient visitors to the site.

5.0 RECOMMENDATIONS

Upon completion of the desktop review and site reconnaissance, Pathfinder finds that few biological constraints are present within the project area. Constraints are summarized below within the regulatory context that they apply, and recommendations are provided.

5.1 Clean Water Act

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into WOTUS (including wetlands) without a permit from the U.S. Army Corps of Engineers Regulatory Branch (USACE). The site does not contain WOTUS, so no permit will be needed.

5.2 Endangered Species Act

Neither State nor federal protected species are expected to occur in the project area. The nearest critical habitat is 4 miles west in the Rio Grande. All species listed in Appendix D occur in habitats that are not present or abundant enough on the site to support them.

5.3 Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Migratory birds, and the parts, nests, or eggs of such birds receive statutory protection under the MBTA, which prohibits the take of migratory birds, their nests, and their offspring. Bald and golden eagles (*Haliaeetus leucocephalus* and *Aquila chrysaetos*, respectively) receive additional statutory protection from take and disturbance under the Bald and Golden Eagle Protection Act (BGEPA). Both acts particularly apply to nesting birds and their nests. No nests were observed on the site. There is no suitable habitat for eagles. Nesting habitat for other migratory birds, however, is present so some nesting should be expected. Thus, we recommend that site clearing activities occur outside of the nesting season (i.e., between September 15 and February 15) to avoid potential disturbance or take of nesting birds.

5.4 Noxious Weeds

No noxious weeds were observed, but seeds may reside in the soil. Thus, digging and moving soil and vegetation should be accomplished such that seeds of noxious weeds that might be extracted are not spread beyond where soil disturbance occurs. All equipment brought onto the site for construction should be pressure washed prior to arrival and washed again after construction in order to minimize the transport of noxious weed seeds to other off-site locations.

Should you have any questions regarding the information or recommendations provided in this report, please feel free to contact Pathfinder at bill@pathfinderenvironmental.com.

Sincerely,

Bill Dunn, PhD
Senior Biologist
Pathfinder Environmental, LLC

6.0 REFERENCES

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Dick-Peddie, William A., 1993. New Mexico Vegetation: past, present, & future, with contributions by W.H. Moir and Richard Spellenberg, published by the University of New Mexico Press, Albuquerque.

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U.S. Geological Survey, National Water Information System. 2022. https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?search_criteria=county_cd&submitted_form=introduction. Accessed 2023/09/10.

U.S. Natural Resource Conservation Service, Web Soil Survey, online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed 2023/09/04.

APPENDIX A – SITE PHOTOGRAPHS

PHOTOPOINT 1. SOUTHWEST CORNER OF THE PROJECT AREA LOOKING NORTHEAST.

PHOTOPOINT 2. NORTHWEST CORNER OF THE PROJECT AREA LOOKING SOUTH.

PHOTOPOINT 3. NORTHEAST CORNER OF THE PROJECT AREA LOOKING SOUTHWEST.

PHOTOPOINT 4. SOUTHEAST CORNER OF THE PROJECT AREA LOOKING NORTHWEST.

PHOTOGRAPH 5. WEST SIDE OF THE PROJECT AREA LOOKING EAST.

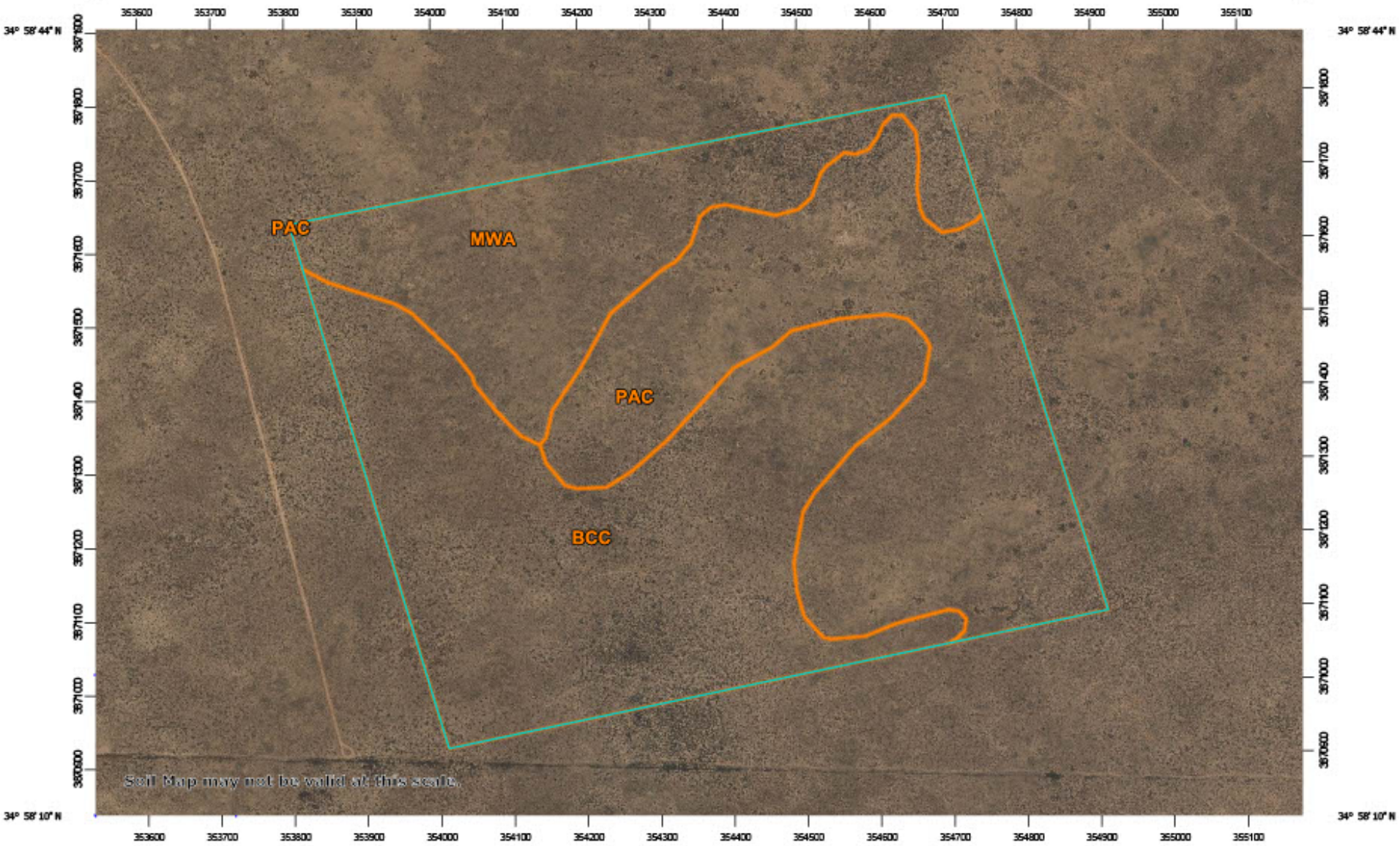
APPENDIX B – PLANTS AND ANIMALS OBSERVED DURING THE SITE VISIT

Plant List	
Scientific Name	**Common Name**
Shrubs and Cacti	
Artemisia filifolia	Sand sage
Yucca angustifolia	Narrowleaf yucca
Atriplex canadensis	Four-winged Saltbush
Ericameria nauseosus	Rubber Rabbitbrush
Ephedra torreyana	Torrey's joint-fir
Psorothamnus scoparia	Broom dalea
Opuntia phaeacantha	Tulip prickly pear
Cylindropuntia imbricata	Tree Cholla
Grasses	
Sporobolus contractus	Spike dropseed
Sporobolus airoides	Alkali Sacaton
Hilaria rigida	Big galleta
Achnatherum hymenoides	Indian ricegrass
Aristida purpurea	Purple three-awn
Erioneuron pulchellum	Fluffgrass
Forbs	
Sphaeralcea sp.	Globemallow
Dalea scariosa	Albuquerque prairie-clover
Salsola tragus	Russian thistle

Animal List		
Scientific Name	**Common Name**	**Evidence of Presence**
Corvus corax	Common Raven	Direct Observation
Toxostoma curvirostre	Curve-billed Thrasher	Direct Observation
Sayornis saya	Say's Phoebe	Direct Observation
Peucaea cassinii	Cassin's Sparrow	Direct Observation
Uta Stansburiana	Side-blotched Lizard	Direct Observation
Xerospermophilus tereticaudus	Round-tailed Ground Squirrel	Direct Observation
Dipodomys spp.	Kangaroo rat	Tracks, Burrows
Canis latrans	Coyote	Tracks

APPENDIX C – SOIL MAP

Soil Map—Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico
(Mesa del Sol Solar Facility)



Map Scale: 1:7,530 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N 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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico
Survey Area Data: Version 17, Sep 8, 2022

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

Date(s) aerial images were photographed: Nov 22, 2020—Jan 1, 2021

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
BCC	Bluepoint loamy fine sand, 1 to 9 percent slopes	70.6	42.3%
MWA	Madurez-Wink associatin, gently sloping	35.9	21.5%
PAC	Pajarito loamy fine sand, 1 to 9 percent slopes	60.5	36.2%
Totals for Area of Interest		**167.0**	**100.0%**

APPENDIX D – IPAC CONSULTATION LETTER & PROTECTED SPECIES LISTS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

In Reply Refer To:
Project Code: 2023-0127002
Project Name: Mesa del Sol Solar Facility

September 11, 2023

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

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq*.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: https://www.emnrd.nm.gov/sfd/rare-plants/

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

In addition to responsibilities to protect threatened and endangered species under the ESA, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 CFR 10.12 and 16 USC 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds. We also recommend review of the Birds of Conservation Concern list (https://www.fws.gov/media/birds-conservation-concern-2021) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 thereby provides additional protection for both migratory birds and migratory bird habitat. Please visit https://www.fws.gov/partner/council-conservation-migratory-birds for information regarding the implementation of Executive Order 13186.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

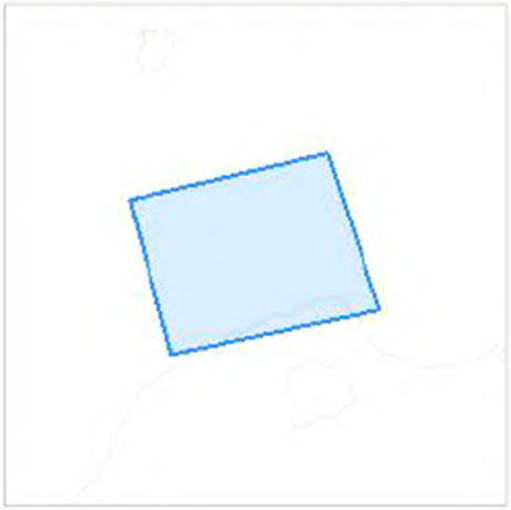
This species list is provided by:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2023-0127002
Project Name: Mesa del Sol Solar Facility
Project Type: New Constr - Above Ground
Project Description: Construction of a solar panel manufacturing facility.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.97443665,-106.5957290043291,14z



Counties: Bernalillo County, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

BIRDS

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

FISHES

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1391

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: N/A
Name: Bill Dunn
Address: 3121 Cardenas Dr NE
City: Albuquerque
State: NM
Zip: 87110
Email billdunn.ecologist@gmail.com
Phone: 5057202534

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

In Reply Refer To:
Project Code: 2024-0053133
Project Name: Maxeon Golden Eagle PV Facility

February 22, 2024

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

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

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We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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OFFICIAL SPECIES LIST

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

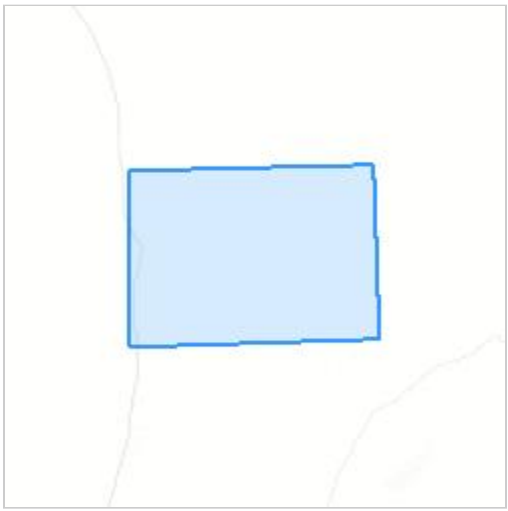
This species list is provided by:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2024-0053133
Project Name: Maxeon Golden Eagle PV Facility
Project Type: New Constr - Above Ground
Project Description: Solar panel and cell manufacturing facility
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.9738212,-106.60550964426736,14z



Counties: Bernalillo County, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

MAMMALS

NAME	STATUS
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7965

BIRDS

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8196

Yellow-billed Cuckoo *Coccyzus americanus*	Threatened

Population: Western U.S. DPS
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/3911

FISHES

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1391

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Heather Patti
Address: 800 Capitola Drive
City: Durham
State: NC
Zip: 27713
Email hdpatti@montrose-env.com
Phone: 9194127384

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Energy

Federal or State Threatened/Endangered Species

Bernalillo

Taxonomic Group	# Species	Taxonomic Group	# Species
Birds	15	Fish	1
Lepidoptera; moths and butterflies	1	Mammals	2

TOTAL SPECIES: 19

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Spotted Bat	Euderma maculatum	T			Y	
Meadow Jumping Mouse	Zapus luteus luteus	E	E	Y	Y	
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	Y	Y	
Broad-billed Hummingbird	Cynanthus latirostris	T			Y	
White-eared Hummingbird	Basilinna leucotis	T				
Least Tern	Sternula antillarum	E			Y	
Neotropic Cormorant	Phalacrocorax brasilianus	T			Y	
Brown Pelican	Pelecanus occidentalis	E				
Bald Eagle	Haliaeetus leucocephalus	T			Y	
Common Black Hawk	Buteogallus anthracinus	T			Y	

Federal or State Threatened/Endangered Species

Bernalillo

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	
Aplomado Falcon	Falco femoralis	E	E		Y	
Peregrine Falcon	Falco peregrinus	T			Y	
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	
Bell's Vireo	Vireo bellii	T			Y	
Gray Vireo	Vireo vicinior	T			Y	
Baird's Sparrow	Centronyx bairdii	T			Y	
Rio Grande Silvery Minnow	Hybognathus amarus	E	E	Y	Y	
Monarch Butterfly	Danaus plexippus		C			

APPENDIX E – PROTECTED SPECIES ANALYSIS

Species	Protection Status[1]	Habitat Requirements	Des. Crit. Hab.	Prop. Crit. Hab.	Habitat Present	Species Present	Effects Analysis	Affects Determination
Spotted Bat *Euderma maculatum*	ST	Rocky cliffs in a variety of plant communities	N	N	N	N	No suitable habitat in the project area.	NE
Meadow Jumping Mouse *Zapus hudsonius luteus*	FE, SE	Sedge-forb-willow zones along permanent streams large wet meadows within river floodplains.	N	N	N	N	No suitable habitat in or near the project area.	NE
Yellow-billed Cuckoo *Coccyzus americanus occidentalis*	FT	Lowland deciduous woodlands, willow and alder thickets, second growth woods, deserted farmlands, and orchards; Dense understory foliage appears to be important for nesting, while cottonwood trees are important foraging habitat.	N	N	N	N	No riparian habitat in or near the project area	NE
Broad-billed Hummingbird *Cynanthus latirostris*	ST	Riparian woodland of sycamores (often with cottonwood, walnut, evergreen oaks, or other tree species) with dense understory in desert foothill drainages and lower mountains canyons.	N	N	N	N	No riparian habitat in or near the project area.	NE
White-eared Hummingbird *Basilinna leucotis*	ST	Montane habitat with pine and pine-oak associations.	N	N	N	N	No suitable habitat in the project area.	NE
Least Tern *Sternula antillarum*	SE	Flat sandy substrates with unobstructed views, generally sandbars and shorelines along	N	N	N	N	No reservoirs with sandbars in or near the project area.	NE

[1] FE = Federally Endangered, FT = Federally Threatened, PFE = Proposed Federally Endangered, SE = State Endangered, ST = State Threatened, Y = Yes, N = No, NE = No Effect

Species	Protection Status[1]	Habitat Requirements	Des. Crit. Hab.	Prop. Crit. Hab.	Habitat Present	Species Present	Effects Analysis	Affects Determination
Neotropic Cormorant *Phalacrocorax brasilianus*	ST	Large bodies of water with abundant fish populations	N	N	N	N	No suitable habitat in the project area.	NE
Brown Pelican *Pelecanus occidentalis*	SE	Large bodies of water with abundant fish populations	N	N	N	N	No suitable habitat in the project area.	NE
Bald Eagle *Haliaeetus leucocephalus*	ST	Prefers woodlands along lakes and rivers.	N	N	N	N	No aquatic habitat in or near the project area.	NE
Common Black Hawk *Buteogallus anthracinus*	ST	Cottonwood bosques and other woodlands around permanent lowland rivers in the SW.	N	N	N	N	No suitable habitat in the project area.	NE
Mexican Spotted Owl *Strix occidentalis lucida*	FT	Breeds in dense, shrubby riparian habitats, usually in close proximity to surface water or saturated soil. Nesting habitat typically occurs in linear riparian zones greater than 30 feet wide and 2 acres in size.	N	N	N	N	No habitat in or near the project area.	NE
Aplomado Falcon *Falco femoralis*	FE, SE	Yucca grasslands and adjacent shrublands at lower elevations.	N	N	N	N	At the northern tip of their range. No sightings in this area in >100 years.	NE
Peregrine Falcon *Falco peregrinus*	ST	Rugged terrain with rocky cliffs and canyons (30 to 1,000+ feet [9 to 305 meters] high) adjacent to rivers, lakes, or streams.	N	N	N	N	No rocky cliffs or canyons adjacent to permanent water in or near the project area.	NE

Species	Protection Status[1]	Habitat Requirements	Des. Crit. Hab.	Prop. Crit. Hab.	Habitat Present	Species Present	Effects Analysis	Affects Determination
Southwestern Willow Flycatcher *Empidonax traillii extimus*	FE	Breeds in dense, shrubby riparian habitats, usually in close proximity to surface water or saturated soil. Nesting habitat typically occurs in linear riparian zones.	N	N	N	N	No dense, shrubby riparian habitat in the project area.	NE
Bell's Vireo *Vireo bellii*	ST	Native forbs and broad-leafed grasses and narrow-leafed riparian plants.	N	N	N	N	No suitable habitat in the project area.	NE
Gray Vireo *Vireo vicinior*	ST	Mixed piñon-juniper, juniper sagebrush associations, and dry brushland with oak scrub woodlands.	N	N	N	N	No suitable habitat in the project area	NE
Baird's Sparrow *Ammodramus bairdii*	ST	Winter migrant only; dense and expansive grasslands with a minor shrub component.	N	N	N	N	Density of grasslands likely insufficient for this species.	NE
Rio Grande Silvery Minnow *Hybognathus amarus*	FE, SE	Riverine habitat	N	N	N	N	No aquatic habitat in the project area.	NE

Department of Energy
Washington, DC 20585

August 25, 2023

Ms. Sydney Lienemann
Deputy Secretary, Strategic Initiatives & Policy
New Mexico Environment Department
1190 St. Francis Drive
Room N4050
Santa Fe, NM 87502

SUBJECT: The U.S. Department of Energy's (DOE's) intent to Prepare an Environmental Assessment (EA) for a proposed Federal Loan Guarantee to Maxeon Americas Inc. for the Photovoltaic Cell and Panel Facility in Mesa Del Sol (Albuquerque), New Mexico.

Dear Ms. Lienemann,

Title XVII of the Energy Policy Act of 2005 (EPAct) established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Maxeon Americas Inc. has applied for a loan guarantee pursuant to the U.S. DOE's Renewable Energy and Efficient Energy Projects Solicitation (Solicitation Number: DE-SOL-0007154) under Title XVII, Innovative Energy Loan Guarantee Program, authorized by EPAct, (REEE Projects). DOE is evaluating whether to provide a federal loan guarantee to Maxeon Americas Inc. to support the development of the proposed Photovoltaic Call and Panel Facility in Mesa Del Sol, New Mexico. The decision to prepare an EA for the Project was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The purpose and need for agency action is to comply with the DOE mandate under Title XVII of the EPAct to select projects for loan guarantees that are consistent with the goals of the Act. The DOE Loan Programs Office (LPO) has determined that the Project as proposed by Maxeon Americas Inc. is eligible pursuant to Section 1703 of EPAct and that it complies with DOE's mandate as defined in the Act (DOE's purpose and need). DOE is using the NEPA process to assist in determining whether to issue a loan guarantee to Maxeon Americas Inc. to support the development of the Project. A goal of DOE's financial assistance for REEE Projects is to support the construction and startup of projects and facilities located in the United States that employ innovative and renewable or efficient energy technologies that avoid, reduce, or sequester anthropogenic emission of greenhouse gases.

The proposed Project is for the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facilities in Mesa Del Sol, New Mexico (Figure 1). While the site is precisely located, a postal address has not been assigned yet but is expected to be in the 5000 block of University Boulevard, Albuquerque, NM 87106. Maxeon Americas Inc.'s current plan is to manufacture 4.5 GWs of photovoltaic cells and modules in the proposed facilities every year, which corresponds to over 6 million solar panels annually.

The new facilities are located on a 160-acre parcel (Golden Eagle Site) and would be comprised of a 993,600-square-foot solar cell manufacturing facility (Cell Fab) and an 897,210-square-foot solar panel assembly facility (MODCO). Each building would include a manufacturing area, manufacturing support space, warehousing, and office space. The Cell Fab and MODCO buildings would be new core and shell, suitable for the manufacturing processes. The new factory would require support facilities that include a Chiller, Boiler, Compressor Plant (CBCP) with Cooling Towers, Waste Treatment Facility, Fluoride Waste Treatment facility, Industrial Water Tank and Pump House, Chemical Warehouse, Bulk Gas Yard, Hazardous Gas Pad, and Emergency/Back-up generators located in a Utility Support Courtyard between the Cell Fab and MODCO (Figure 2). The site would require facility roads, logistics shipping, a receiving and container yard, approximately 1,600 parking spaces, fire access roads/loops around the factories, and site storm water management/retention ponds.

Construction activities would provide additional job opportunities within the local community during the 18-24 months of construction. During operations, once the factory is ramped to its full entitled output capacity, Maxeon Americas Inc. would employ approximately 1,800 full time employees, including engineers, managers, administrative support personnel, technicians, facility and equipment, maintenance workers, factory operators, and logistics personnel.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process, please contact me at 202-913-3477, or email at LPO_Environmental@hq.doe.gov.

Sincerely,

DONALD BROWN

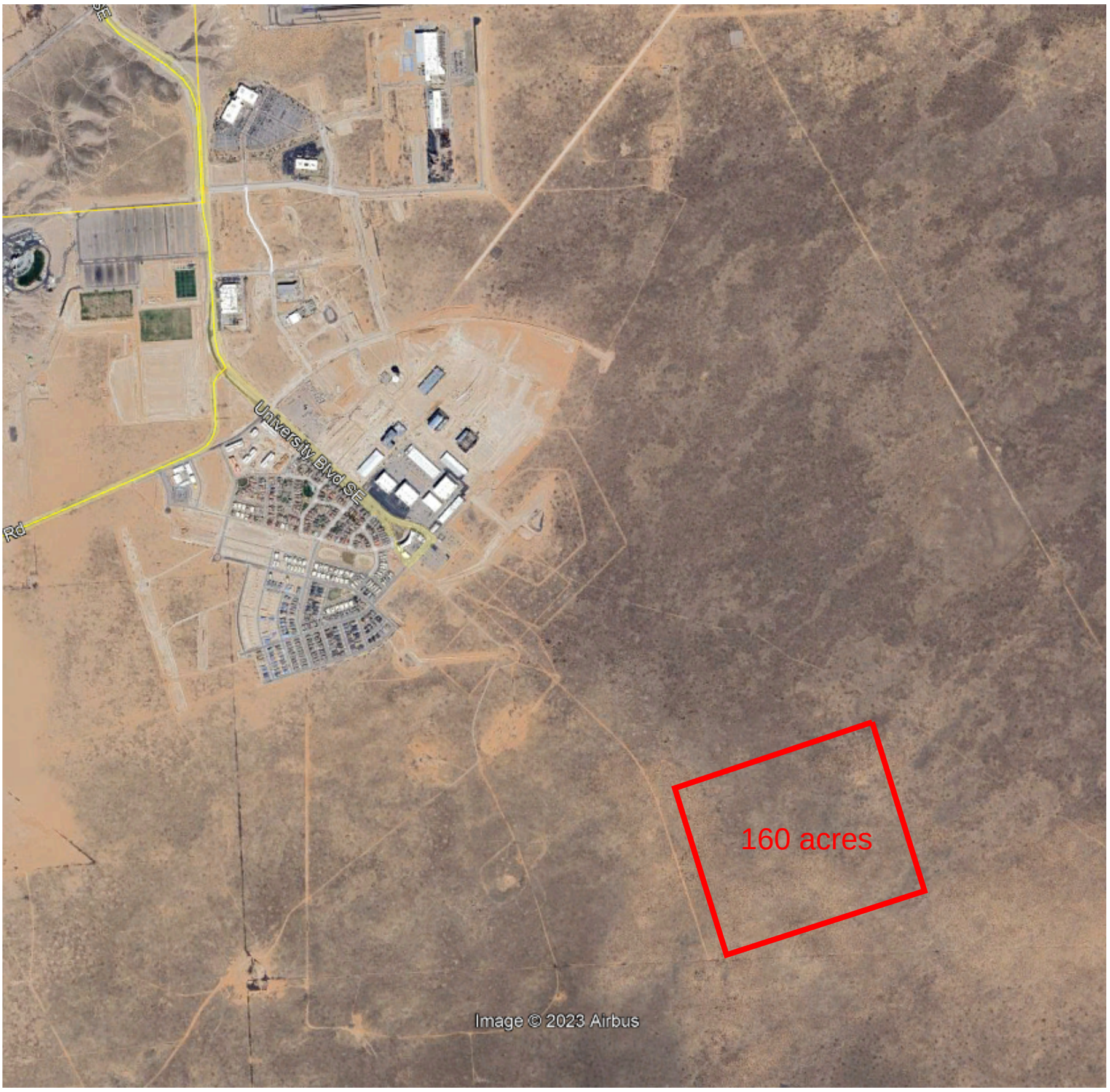
Digitally signed by DONALD BROWN
Date: 2023.08.28 13:49:56 -04'00'

Don Brown
NEPA Document Manager
Loan Programs Office

Attachments:
Figure 1: Project Location
Figure 2: Conceptual Layout

State of New Mexico

★ Project Site Location



PROPERTY BOUNDARY

N

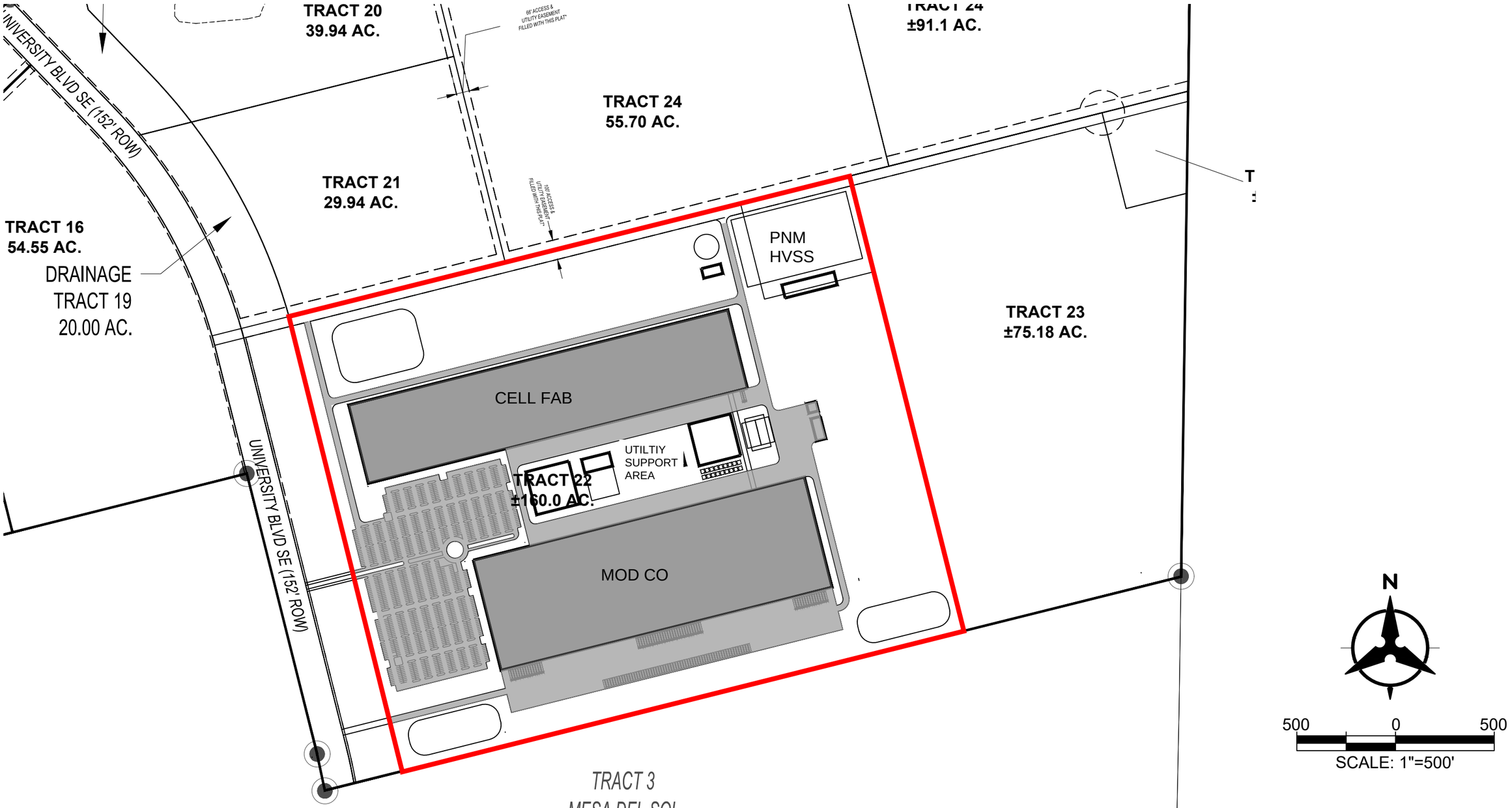
Project - Golden Eagle

Mesa Del Sol - Albuquerque, NM

FIGURE 1 **Date: August 2023**

maxeon

Bohannan Huston



TRACT 3
MESA DEL SOL
(BK. 2006C, PG. 195)

FIGURE 2
PROJECT GOLDEN EAGLE
MESA DEL SOL - ALBUQUERQUE, NM

DATE: 8/23/2023

BHI PROJECT NO. 20240118

SHEET NO. 1 OF 1

maxeon

Bohannan Huston
www.bhinc.com 800.877.5332

Wed, 23-Aug-2023 - 5:23:pm, Plotted by: MBALASKOVITS
P:\20240118\CDP\Design\Workarea\Tract18Bulk\LandPlat.dwg

Department of Energy
Washington, DC 20585

January 10, 2024

Ms. Sydney Lienemann
Deputy Secretary, Strategic Initiatives & Policy
New Mexico Environment Department
1190 St. Francis Drive
Room N4050
Santa Fe, NM 87502

SUBJECT: U.S. Department of Energy, Proposed Federal Loan Guarantee to Maxeon for Golden Eagle Project in Albuquerque, New Mexico

Dear Ms. Lienemann,

The U.S. Department of Energy (DOE), Loan Programs Office (LPO) prepared an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to consider the environmental impacts of its decision whether or not to provide a Federal loan guarantee to Maxeon to support the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facility (Golden Eagle project) on a 126-acre site along University Boulevard in Albuquerque, New Mexico. The decision to prepare an EA was made in accordance with the requirements of NEPA, the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

LPO provides loans and loan guarantees under four programs – the Title 17 Clean Energy Financing Program (Title 17), the Advanced Transportation Financing Program, the Tribal Energy Financing Program, and the Carbon Dioxide Transportation Infrastructure Program. The loan under consideration to Maxeon is under Title 17, which has a primary goal to finance projects and facilities in the United States (U.S.) that employ innovative and renewable or efficient energy technologies that avoid, reduce, or sequester anthropogenic emission of greenhouse gases (GHGs).

Maxeon's plans are to manufacture 3.7 gigawatts (GWs) of photovoltaic cells and 3.5 GW of modules in the proposed facilities every year, which corresponds to about 5.8 million solar panels annually. Maxeon's objective is to supplement their two existing factories in Mexico that supply products for the U.S. market, which are already at full production capacity.

As an interested party and in accordance with DOE NEPA regulations, the EA with the draft Finding of No Significant Impact (FONSI) is included in the following link: https://www.energy.gov/lpo/environmental-assessments. If you have trouble accessing the link or need a copy, please contact LPO at LPO_Environmental@hq.doe.gov.

Please review and provide any comment you may have **by Monday, February 12, 2024 (comments must be received by this date):**

Email:
Please include "Maxeon Golden Eagle EA" in the subject line
LPO_Environmental@hq.doe.gov

Mail:
Maxeon Golden Eagle Environmental Assessment
Department of Energy –
Loan Programs Office
c/o ICF Consulting
1902 Reston Metro Plaza
Reston, VA 20190

Sincerely,

DONALD BROWN Digitally signed by DONALD BROWN
Date: 2024.01.10 11:46:49 -05'00'

Donald Brown
NEPA Document Manager
Loan Programs Office

February 12, 2024

Maxeon Golden Eagle Environmental Assessment
Department of Energy, Loan Programs Office
c/o ICF Consulting
1902 Reston Metro Plaza
Reston, VA 20190

Submitted electronically to: LPO_Environmental@hq.doe.gov

RE: U.S. Department of Energy, Proposed Federal Loan Guarantee to Maxeon for Golden Eagle Project in Albuquerque, New Mexico

NEPA Document Manager Brown,

The New Mexico Environment Department (NMED) offers a favorable opinion of the Proposed Federal Loan Guarantee to Maxeon for the Golden Eagle Project in Albuquerque, New Mexico. The Project will create clean energy jobs and products that align with and advance New Mexico's commitment to reducing carbon emissions to combat climate change.

NMED concurs with the Department of Energy's Environmental Assessment and Finding of No Significant Impact (EA/FONSI). Our attached comments identify technical corrections to the EA/FONSI and two suggested considerations for project permitting.

We appreciate this opportunity to comment.

Sincerely,

Jonas Armstrong
Digitally signed by Jonas Armstrong
Date: 2024.02.12 20:50:23 -07'00'

Jonas Armstrong, Director
Office of Strategic Initiatives

Attachment (1)

Attachment

Introduction

The U.S. Department of Energy's (DOE) Loan Programs Office (LPO) prepared an Environmental Assessment (EA) pursuant to the National Environmental Policy Act to consider the environmental impacts of its decision of whether to provide a federal loan guarantee to Maxeon to support the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facility ("the Project") on a 126-acre site along University Boulevard in Albuquerque, New Mexico. DOE-LPO Drafted an Environmental Assessment and Finding of No Significant Impact (EA/FONSI). The New Mexico Environment Department (NMED) concurs with DOE's EA/FONSI determination but has identified a few technical corrections and suggested considerations.

The Project will create clean energy jobs and products that align with and advance New Mexico's commitment to reducing carbon emissions to combat climate change. In 2019, New Mexico passed the Energy Transition Act (ETA), establishing the state as a national leader in clean energy. The ETA sets a statewide renewable energy standard of 50 percent by 2030 for New Mexico investor-owned utilities (IOUs) and rural electric cooperatives. The renewable energy standard rises to 80 percent by 2040 for IOUs and requires all generation to be from zero-carbon resource for 2045. Rural electric cooperatives must achieve a zero-carbon resource standard by 2050 comprised of at least 80% renewables. The law transitions New Mexico away from coal and toward clean electricity, ensuring greater renewable electricity production and reducing costs for consumers, and provides tens of millions of dollars of economic and workforce support for communities impacted by coal plant closures, as well as the development of renewable replacement power.

By producing solar panels for both the utility scale power plant and distributed rooftop generation market, the Project will increase access to technology to help New Mexico meet the goals laid out in the ETA and to reduce carbon emissions from electricity generation well-beyond our state's borders. As noted in the EA/FONSI "[Greenhouse gas] emissions associated with the construction of the Project would be minimal compared to the CO2 offset resulting from use of the PV panels from the proposed manufacturing facility."

Comments

Technical Corrections

DOE should correct Section 1.4, Scope of Environmental Assessment anticipated environmental permit list to identify that the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities is issued by the EPA Region 6, not NMED. Similarly, Appendix A should NPDES General Permit for Stormwater Discharges from Construction Activities is issued by the EPA Region 6, not NMED.

Sedimentation and Erosion Control (S&EC) and Storm Water Pollution Prevention Plans (SWPPP) are not requirements of EPA publicly operated treatment works wastewater treatment plant NPDES permits. DOE should correct the statement in Section 3.3.1, Groundwater and Surface Water, that reads "An S&EC Plan and SWPPP to support the NPDES wastewater permit" to read "An S&EC Plan and SWPPP to support the NPDES stormwater permit". Again, the same correction should be made in Appendix A, which incorrectly notes that the SWPP and Spill Prevention Control and Countermeasure (SPCC) plan are required by EPA and not NMED.

Finally, DOE should correct Appendix A to identify that the Industrial Pretreatment and Discharge Permit is required by EPA and/or ABCWUA, not NMED.

Suggested Considerations

The Project includes installation of sanitary sewer services and the construction of a site-specific advanced wastewater treatment plant (AWTP), including the fluoride waste treatment plant and acid-waste neutralization system. Both the sanitary and industrial systems will discharge to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) National Pollutant Discharge Elimination System (NPDES) permit NM0022250. The sewer lines, lift stations, and collection systems are included in the NPDES permit coverage area. Maxeon should be sure to consider sewer overflow events and discharges that may be affected by the Project. Any spills and releases from the potable and wastewater lines, or releases of other chemicals and pollutants, should be reported as required by the ABCWUA NPDES permit number NM0022250 and 20.6.2.1203 NMAC.

The Project's AWTP, solar photovoltaic cell fabrication facility, and panel assembly facility may be Sectors that require NPDES Multi-Sector General Permit (MSGP) coverage, which would require an SWPPP for the Project and that appropriate best management practices be installed and maintained to prevent, to the extent practicable, pollutants in stormwater runoff from entering WOTUS. Coverage under the MSGP is required for stormwater discharges to waters of the United States (WOTUS) associated with specific categories of industrial activity or sectors. If required, the SWPPP should include discharge and spill reporting requirements as outlined in the ABCWUA NPDES permit number NM0022250 and 20.6.2.1203 NMAC.

Department of Energy
Washington, DC 20585

August 25, 2023

Chairman Durell Cooper
Apache Tribe of Oklahoma
511 East Colorado
Anadarko, OK 73005

SUBJECT: U.S. Department of Energy Proposed Federal Loan Guarantee to Maxeon Americas Inc. for Photovoltaic Cell and Panel Facility in Mesa Del Sol (Albuquerque), New Mexico

Dear Chairman Cooper,

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to assist in determining whether to provide Federal financial assistance (a loan guarantee) to Maxeon Americas Inc. to support the construction and operation of a new photovoltaic (solar) cell fabrication and solar panel assembly facilities in Mesa Del Sol, New Mexico (Figure 1). While the site is precisely located, a postal address has not been assigned yet but is expected to be in the 5000 block of University Boulevard, Albuquerque, NM 87106. Maxeon Americas Inc.'s current plan is to manufacture 4.5 GWs of photovoltaic cells and modules in the proposed facilities every year, which corresponds to over 6 million solar panels annually. As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

The new facilities are located on a 160-acre parcel (Golden Eagle Site) and would be comprised of a 993,600-square-foot solar cell manufacturing facility (Cell Fab) and an 897,210-square-foot solar panel assembly facility (MODCO). Each building would include a manufacturing area, manufacturing support space, warehousing, and office space. The Cell Fab and MODCO buildings would be new core and shell, suitable for the manufacturing processes. The new factory would require support facilities that include a Chiller, Boiler, Compressor Plant (CBCP) with Cooling Towers, Waste Treatment Facility, Fluoride Waste Treatment facility, Industrial Water Tank and Pump House, Chemical Warehouse, Bulk Gas Yard, Hazardous Gas Pad, and Emergency/Back-up generators located in a Utility Support Courtyard between the Cell Fab and MODCO (Figure 2). The site would require facility roads, logistics shipping, a receiving and container yard, approximately 1,600 parking spaces, fire access roads/loops around the factories, and site storm water management/retention ponds.

Construction activities would provide additional job opportunities within the local community during the 18-24 months of construction. During operations, once the factory is ramped to its full entitled output capacity, Maxeon Americas Inc. would employ approximately 1,800 full time employees, including engineers, managers, administrative support personnel, technicians, facility and equipment, maintenance workers, factory operators, and logistics personnel.

This letter is intended to notify you of the proposed Federal project (a potential loan to Maxeon Americas Inc.), identify if you have an interest in the proposed project site in Mesa Del Sol, New Mexico, and provide you with the opportunity to comment and engage DOE in government-to-government consultation on the proposed project. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities. We want to give you the opportunity to raise any issues or concerns you may have regarding the Project site.

I would greatly appreciate notification if you do or do not have an interest in the project sites, as well as any comments or concerns you may have, within thirty (30) days of receipt of this letter (October 1, 2023). Should you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email at LPO_Environmental@hq.doe.gov, or contact me by telephone at 202-913-3477.

Respectfully,

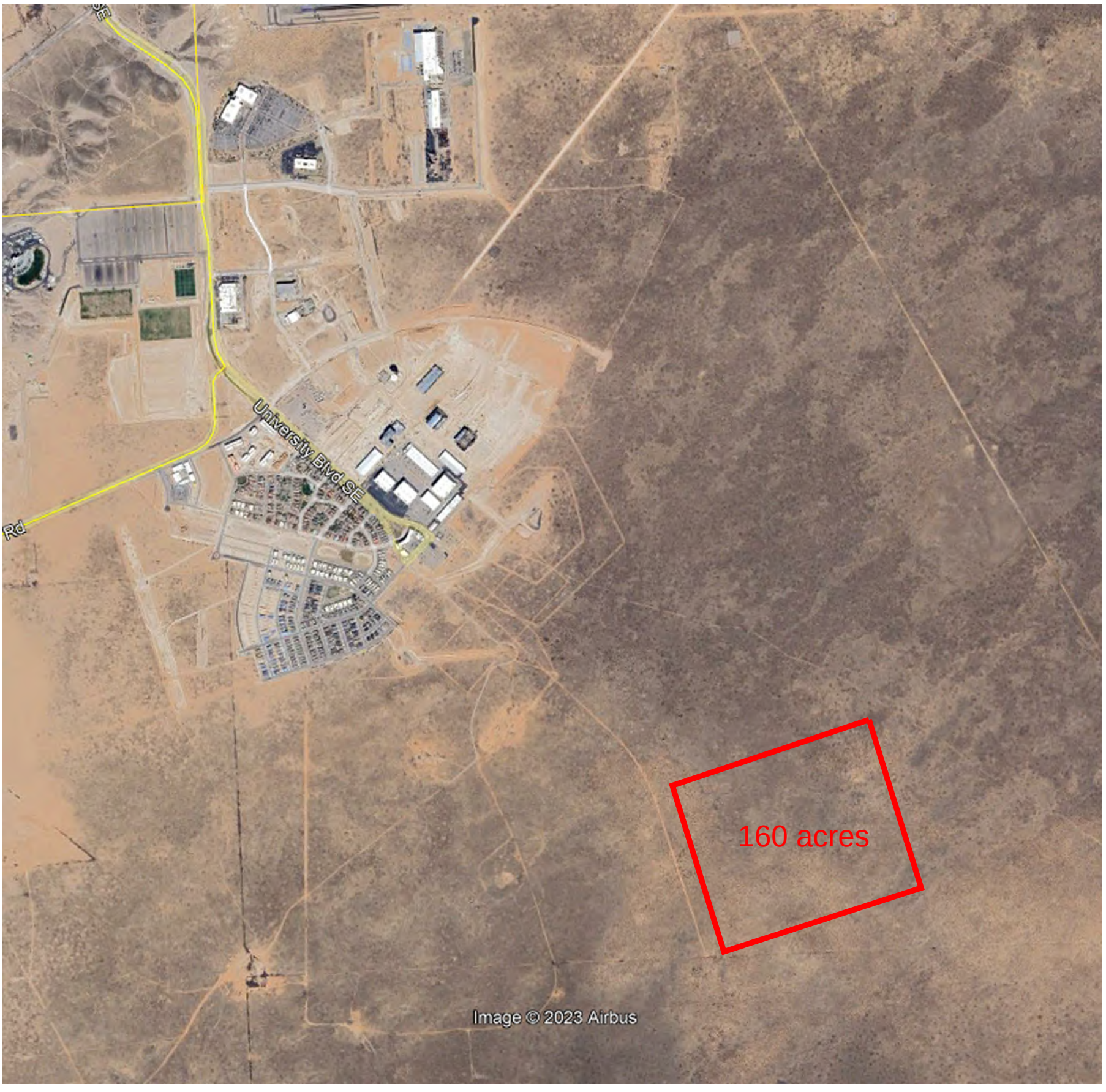
DONALD BROWN Digitally signed by DONALD BROWN
Date: 2023.08.25 17:59:14 -04'00'

Don Brown
NEPA Document Manager
Loan Programs Office

Attachments:
Figure 1: Site Location Map
Figure 2: Facility Proposed Plan

State of New Mexico

★ Project Site Location



PROPERTY BOUNDARY

N

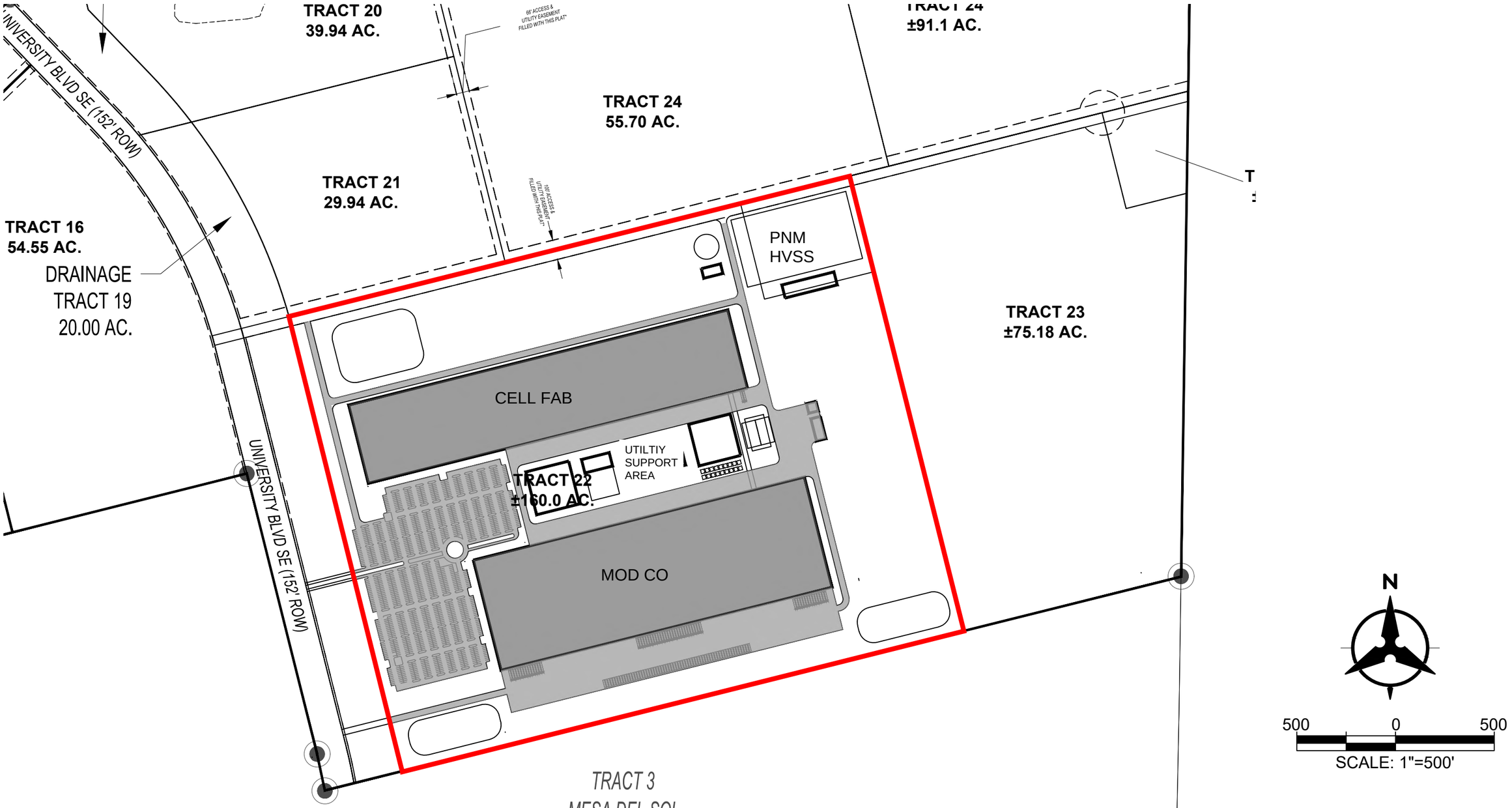
Project - Golden Eagle

Mesa Del Sol - Albuquerque, NM

FIGURE 1 **Date: August 2023**

maxeon

Bohannan Huston



TRACT 3
MESA DEL SOL
(BK. 2006C, PG. 195)

FIGURE 2
PROJECT GOLDEN EAGLE
MESA DEL SOL - ALBUQUERQUE, NM

DATE: 8/23/2023

BHI PROJECT NO. 20240118

SHEET NO. 1 OF 1

maxeon

Bohannan Huston
www.bhinc.com 800.877.5332

Wed, 23-Aug-2023 - 5:23:pm, Plotted by: MBALASKOVITS
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Department of Energy
Washington, DC 20585

November 15, 2023

Chairman Durell Cooper
Apache Tribe of Oklahoma
511 East Colorado
Anadarko, OK 73005

SUBJECT: U.S. Department of Energy, Maxeon Americas Inc. Project in Mesa Del Sol, New Mexico; Cultural Survey Results Notification.

Dear Chairman Cooper,

The Department of Energy (DOE) Loan Program Office (LPO) contacted you via email on August 28, 2023 regarding our intent to prepare an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to assist in determining whether to provide Federal financial assistance (a loan guarantee) to Maxeon Americas Inc. to support the construction and operation of a new photovoltaic (solar) cell fabrication and solar panel assembly facilities in Mesa Del Sol, New Mexico (Figure 1). As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA). DOE's letter provided you the opportunity to comment and engage DOE in government-to-government consultation on the proposed project.

On October 4, 2023, Pathfinder Environmental, LLC, on behalf of Maxeon Americas Inc., completed "A Class I Archival and Records Search and Class III Pedestrian Inventory Survey of 160 Acres for the Proposed Maxeon Solar Technologies, LTD, Solar Factory, Mesa del Sol Development, Albuquerque, Bernalillo County, New Mexico." Based on the results of the survey, Pathfinder determined further testing of the site was necessary and New Mexico SHPO agreed with this determination in a letter dated October 12, 2023.

In early November 2023, Pathfinder Environmental, LLC completed the additional testing and submitted the "Cultural Resource Report: Addendum to NMCRIS 153855" to New Mexico SHPO. As described in the report, LA 203524 is a surface scatter of flaked stone debris and the test excavations indicated that the site is 1–25 percent intact and has little potential for buried prehistoric cultural deposits. Manual excavation of the 12 50-cm x 50-cm test units did not yield evidence of cultural remains or buried cultural deposits. Based on these results, DOE is recommending site LA 203524 is not eligible for the National Register of Historic Places (NRHP). DOE provided this report to the New Mexico SHPO for review and comment in November 2023.

Based on the identification efforts described above, DOE has determined that there are no historic properties within the APE and has issued a finding of No Historic Properties Affected for this undertaking. This determination was sent to New Mexico SHPO for their concurrence on November 7, 2023.

This letter is intended to notify you of the status of the Section 106 consultation process with the New Mexico SHPO and offer you the opportunity to review the reports referenced, which can be provided upon request. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities.

If you have any questions or would like to discuss this project or the results of the cultural resources surveys further, please contact me in the DOE Loan Program Office at (202) 913-3477 or by email at LPO_Environmental@hq.doe.gov.

Respectfully,

DONALD BROWN Digitally signed by DONALD BROWN
Date: 2023.11.15 11:59:19 -05'00'

Donald Brown
Environmental Compliance
Loan Program Office

cc: Sterling Chalepah, Environmental Program

Department of Energy
Washington, DC 20585

January 10, 2024

Chairman Durell Cooper
Apache Tribe of Oklahoma
511 East Colorado
Anadarko, OK 73005

SUBJECT: U.S. Department of Energy, Proposed Federal Loan Guarantee to Maxeon for Golden Eagle Project in Albuquerque, New Mexico

Dear Chairman Cooper,

The U.S. Department of Energy (DOE), Loan Programs Office (LPO) prepared an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to consider the environmental impacts of its decision whether or not to provide a Federal loan guarantee to Maxeon to support the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facility (Golden Eagle project) on a 126-acre site along University Boulevard in Albuquerque, New Mexico. The decision to prepare an EA was made in accordance with the requirements of NEPA, the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

LPO provides loans and loan guarantees under four programs – the Title 17 Clean Energy Financing Program (Title 17), the Advanced Transportation Financing Program, the Tribal Energy Financing Program, and the Carbon Dioxide Transportation Infrastructure Program. The loan under consideration to Maxeon is under Title 17, which has a primary goal to finance projects and facilities in the United States (U.S.) that employ innovative and renewable or efficient energy technologies that avoid, reduce, or sequester anthropogenic emission of greenhouse gases (GHGs).

Maxeon's plans are to manufacture 3.7 gigawatts (GWs) of photovoltaic cells and 3.5 GW of modules in the proposed facilities every year, which corresponds to about 5.8 million solar panels annually. Maxeon's objective is to supplement their two existing factories in Mexico that supply products for the U.S. market, which are already at full production capacity.

As an interested party and in accordance with DOE NEPA regulations, the EA with the draft Finding of No Significant Impact (FONSI) is included in the following link:

https://www.energy.gov/lpo/environmental-assessments. If you have trouble accessing the link or need a copy, please contact LPO at LPO_Environmental@hq.doe.gov.

Please review and provide any comment you may have **by Monday, February 12, 2024 (comments must be received by this date):**

Email:
Please include "Maxeon Golden Eagle EA" in the subject line
LPO_Environmental@hq.doe.gov

Mail:
Maxeon Golden Eagle Environmental Assessment
Department of Energy –
Loan Programs Office
c/o ICF Consulting
1902 Reston Metro Plaza
Reston, VA 20190

Sincerely,

DONALD BROWN Digitally signed by DONALD BROWN
Date: 2024.01.10 14:22:41 -05'00'

Donald Brown
NEPA Document Manager
Loan Programs Office

cc: Sterling Chalepah, Environmental Program

Department of Energy
Washington, DC 20585

November 8, 2023

Dr. Jeff Pappas
State Historic Preservation Officer
New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

SUBJECT: U.S. Department of Energy, Maxeon Americas Inc. Project in Mesa Del Sol, New Mexico; Section 106 Consultation

Dear Dr. Pappas:

Title XVII of the Energy Policy Act of 2005 (EPAct) established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Maxeon Americas Inc. has applied for a loan guarantee pursuant to the U.S. Department of Energy's (DOE) Renewable Energy and Efficient Energy Projects Solicitation (Solicitation Number: DE-SOL-0007154) under Title XVII, Innovative Energy Loan Guarantee Program, authorized by EPAct, (REEE Projects). DOE is evaluating whether to provide a federal loan guarantee to Maxeon Americas Inc. to support the development of the proposed development of the proposed Photovoltaic Cell and Panel Facility (the Project) in Mesa Del Sol, New Mexico (DOE's proposed action and undertaking). The purpose of this letter is to consult with the New Mexico State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800, present the DOE undertaking, present the area of potential effects (APE), and seek your concurrence with DOE's finding of No Historic Properties Affected for this project. This Section 106 consultation is being coordinated with DOE's review of the Project pursuant the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

DOE Undertaking and APE

The DOE undertaking (providing a loan to Maxeon Americas Inc. for the proposed Project) would involve the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facilities in Mesa Del Sol, New Mexico. While the site is precisely located, a postal address has not been assigned yet but is expected to be in the

5000 block of University Boulevard, Albuquerque, NM 87106 (Attachment 1). Maxeon Americas Inc.'s current plan is to manufacture 4.5 GWs of photovoltaic cells and modules in the proposed facilities every year, which corresponds to over six million solar panels annually.

The new facilities are located on a 160-acre parcel (Golden Eagle Site) and would be comprised of a 993,600-square-foot solar cell manufacturing facility (Cell Fab) and an 897,210-square-foot solar panel assembly facility (MODCO). Each building would include a manufacturing area, manufacturing support space, warehousing, and office space. The Cell Fab and MODCO buildings would be new core and shell, suitable for the manufacturing processes. The new factory would require support facilities that include a Chiller, Boiler, Compressor Plant (CBCP) with Cooling Towers, Waste Treatment Facility, Fluoride Waste Treatment facility, Industrial Water Tank and Pump House, Chemical Warehouse, Bulk Gas Yard, Hazardous Gas Pad, and Emergency/Back-up generators located in a Utility Support Courtyard between the Cell Fab and MODCO (Attachment 2). The site would require facility roads, logistics shipping, a receiving and container yard, approximately 1,600 parking spaces, fire access roads/loops around the factories, and site storm water management/retention ponds.

Construction activities would provide additional job opportunities within the local community during the 18-24 months of construction. During operations, once the factory is ramped to its full entitled output capacity, Maxeon Americas Inc. would employ approximately 1,800 full time employees, including engineers, managers, administrative support personnel, technicians, facility and equipment, maintenance workers, factory operators, and logistics personnel.

The proposed archaeological APE includes the area subject to ground-disturbing activities, constituting the 160-acre parcel, which is made up of the components described above (Attachment 3). The architectural APE includes the entire 160-acre building area where new above-ground structures would be located (see Attachment 3).

Identification of Historic Properties

The architectural APE consists of unimproved land. Based on aerial images and as noted during the pedestrian survey described below, there are no standing structures within this portion of the APE. Therefore, there are no NRHP eligible architectural historic properties within the APE.

On October 4, 2023, Maxeon Americas Inc. submitted "A Class I Archival and Records Search and Class III Pedestrian Inventory Survey of 160 Acres for the Proposed Maxeon Solar Technologies, LTD, Solar Factory, Mesa del Sol Development, Albuquerque, Bernalillo County, New Mexico" and the "Testing Plan for LA 203524, Mesa del Sol, Maxeon Solar Project" prepared by Pathfinder Environmental, LLC to the New Mexico SHPO for review and comment. The report included the results of the Class I records search and Class III (100 percent) cultural resource pedestrian survey of the APE for the

Project. On October 12, 2023, the New Mexico SHPO concurred with the results and recommendation specified in the report and testing plan.

In early November 2023, Pathfinder Environmental, LLC, on behalf of Maxeon Americas Inc., completed the additional testing per the testing plan. The resulting report, "Cultural Resource Report: Addendum to NMCRIS 153855," is attached to this letter for your review (Attachment 4). LA 203524 is a surface scatter of flaked stone debris and the test excavations indicated that the site is 1–25 percent intact and has little potential for buried prehistoric cultural deposits. Manual excavation of the 12 50-cm x 50-cm test units did not yield evidence of cultural remains or buried cultural deposits. Based on these results, DOE is recommending site LA 203524 not eligible for the National Register of Historic Places (NRHP).

Determination of Effect

Based on the identification efforts described above, DOE has determined that there are no historic properties within the APE. Therefore, DOE is issuing a finding of No Historic Properties Affected for this undertaking.

Section 106 Next Steps

In accordance with Section 106, DOE is identifying other potential consulting parties to include the Applicant, Native American Indian Tribes that have an interest in the project area, local governments, historical societies, preservation organizations, and the Advisory Council on Historic Preservation (ACHP). Currently, DOE has identified the following Tribes and has invited them to consult on this project: Apache Tribe of Oklahoma; Comanche Nation, Oklahoma; Navajo Nation, Arizona, New Mexico & Utah; Pueblo of Isleta, New Mexico; and Pueblo of Laguna, New Mexico. DOE welcomes your input on other potential consulting parties. DOE will invite the potential consulting parties to participate in the Section 106 process.

We look forward to consulting with your office throughout the Section 106 process. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (202) 913-3477 or email at donald.brown@hq.doe.gov.

Respectfully,

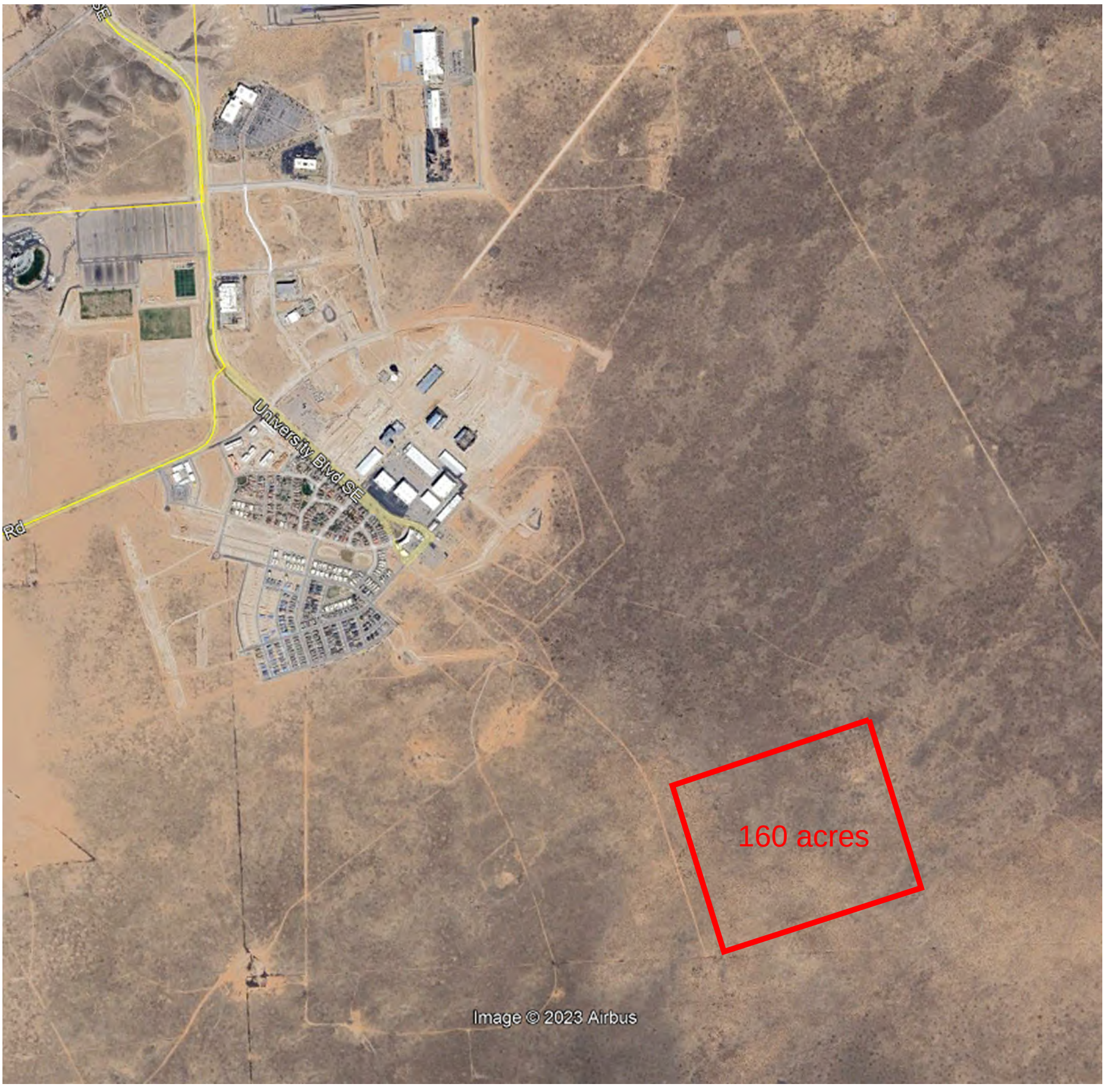
DONALD BROWN Digitally signed by DONALD BROWN
Date: 2023.11.08 08:58:54 -05'00'

Donald Brown
Environmental Compliance
Loan Programs Office

Attachments:
Attachment 1: Facility Location Map
Attachment 2: Facility Site Plan
Attachment 3: Project APE Map
Attachment 4: “Cultural Resource Report: Addendum to NMCRIS 153855”

State of New Mexico

★ Project Site Location



PROPERTY BOUNDARY

N

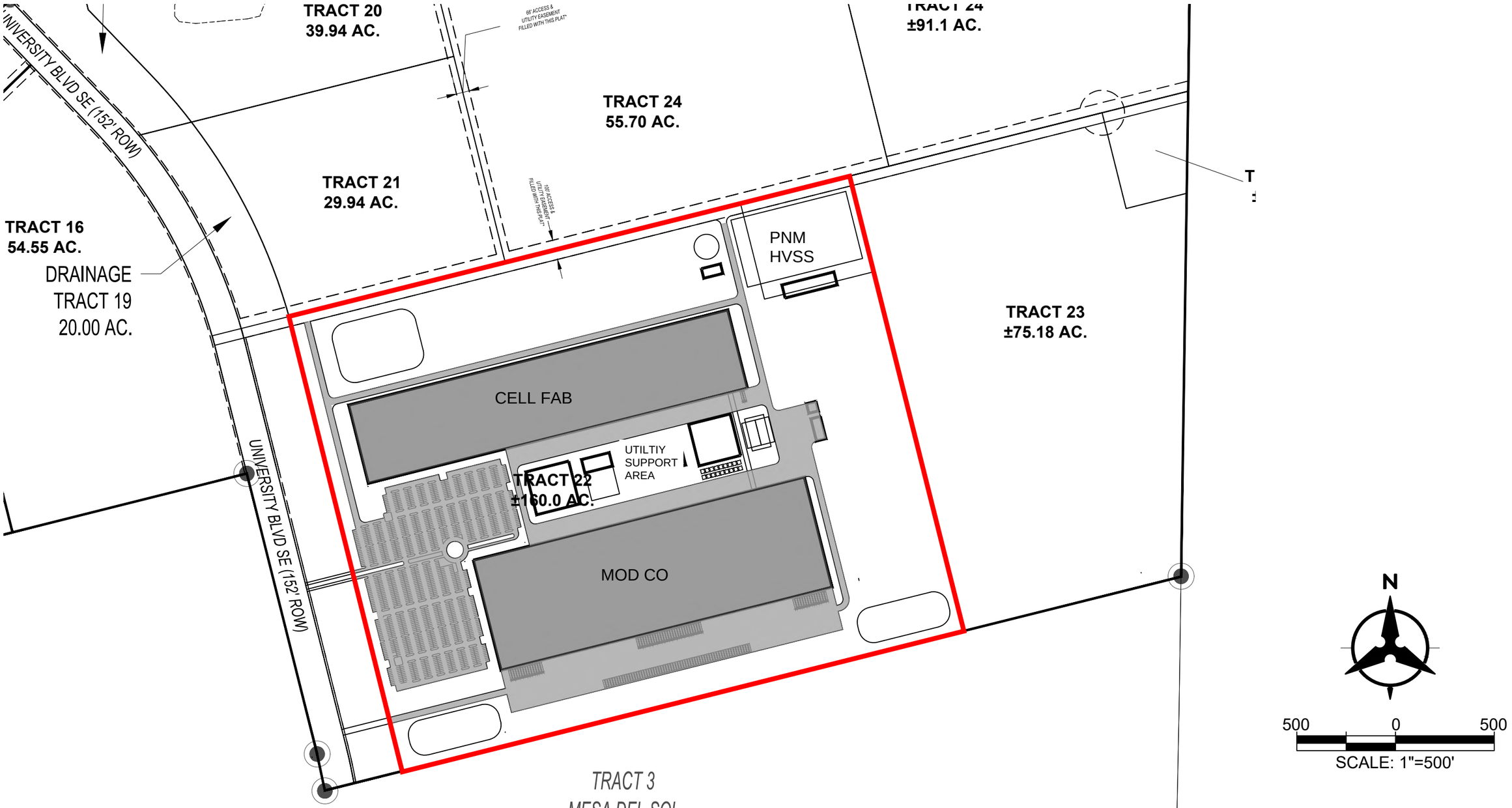
Project - Golden Eagle

Mesa Del Sol - Albuquerque, NM

FIGURE 1 **Date: August 2023**

maxeon

Bohannan Huston



TRACT 3
MESA DEL SOL
(BK. 2006C, PG. 195)

FIGURE 2
PROJECT GOLDEN EAGLE
MESA DEL SOL - ALBUQUERQUE, NM

DATE: 8/23/2023

BHI PROJECT NO. 20240118

SHEET NO. 1 OF 1

maxeon

Bohannan Huston
www.bhinc.com 800.877.5332

Wed, 23-Aug-2023 - 5:23:pm, Plotted by: MBALASKOVITS
P:\20240118\CDP\Design\Workarea\Tract18Bulk\LandPlat.dwg

Figure 1.2. Project APE, aerial showing photo points (PP).

Department of Energy
Washington, DC 20585

November 8, 2023

Dr. Jeff Pappas
State Historic Preservation Officer
New Mexico Historic Preservation Division
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

SUBJECT: U.S. Department of Energy, Maxeon Americas Inc. Project in Mesa Del Sol, New Mexico; Section 106 Consultation

Dear Dr. Pappas:

Title XVII of the Energy Policy Act of 2005 (EPAct) established a federal loan guarantee program for certain projects that employ innovative technologies and authorizes the Secretary of Energy to make loan guarantees available for those projects. Maxeon Americas Inc. has applied for a loan guarantee pursuant to the U.S. Department of Energy's (DOE) Renewable Energy and Efficient Energy Projects Solicitation (Solicitation Number: DE-SOL-0007154) under Title XVII, Innovative Energy Loan Guarantee Program, authorized by EPAct, (REEE Projects). DOE is evaluating whether to provide a federal loan guarantee to Maxeon Americas Inc. to support the development of the proposed development of the proposed Photovoltaic Cell and Panel Facility (the Project) in Mesa Del Sol, New Mexico (DOE's proposed action and undertaking). The purpose of this letter is to consult with the New Mexico State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800, present the DOE undertaking, present the area of potential effects (APE), and seek your concurrence with DOE's finding of No Historic Properties Affected for this project. This Section 106 consultation is being coordinated with DOE's review of the Project pursuant the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

DOE Undertaking and APE

The DOE undertaking (providing a loan to Maxeon Americas Inc. for the proposed Project) would involve the construction and operation of a new photovoltaic (solar) cell fabrication and panel assembly facilities in Mesa Del Sol, New Mexico. While the site is precisely located, a postal address has not been assigned yet but is expected to be in the

5000 block of University Boulevard, Albuquerque, NM 87106 (Attachment 1). Maxeon Americas Inc.'s current plan is to manufacture 4.5 GWs of photovoltaic cells and modules in the proposed facilities every year, which corresponds to over six million solar panels annually.

The new facilities are located on a 160-acre parcel (Golden Eagle Site) and would be comprised of a 993,600-square-foot solar cell manufacturing facility (Cell Fab) and an 897,210-square-foot solar panel assembly facility (MODCO). Each building would include a manufacturing area, manufacturing support space, warehousing, and office space. The Cell Fab and MODCO buildings would be new core and shell, suitable for the manufacturing processes. The new factory would require support facilities that include a Chiller, Boiler, Compressor Plant (CBCP) with Cooling Towers, Waste Treatment Facility, Fluoride Waste Treatment facility, Industrial Water Tank and Pump House, Chemical Warehouse, Bulk Gas Yard, Hazardous Gas Pad, and Emergency/Back-up generators located in a Utility Support Courtyard between the Cell Fab and MODCO (Attachment 2). The site would require facility roads, logistics shipping, a receiving and container yard, approximately 1,600 parking spaces, fire access roads/loops around the factories, and site storm water management/retention ponds.

Construction activities would provide additional job opportunities within the local community during the 18-24 months of construction. During operations, once the factory is ramped to its full entitled output capacity, Maxeon Americas Inc. would employ approximately 1,800 full time employees, including engineers, managers, administrative support personnel, technicians, facility and equipment, maintenance workers, factory operators, and logistics personnel.

The proposed archaeological APE includes the area subject to ground-disturbing activities, constituting the 160-acre parcel, which is made up of the components described above (Attachment 3). The architectural APE includes the entire 160-acre building area where new above-ground structures would be located (see Attachment 3).

Identification of Historic Properties

The architectural APE consists of unimproved land. Based on aerial images and as noted during the pedestrian survey described below, there are no standing structures within this portion of the APE. Therefore, there are no NRHP eligible architectural historic properties within the APE.

On October 4, 2023, Maxeon Americas Inc. submitted "A Class I Archival and Records Search and Class III Pedestrian Inventory Survey of 160 Acres for the Proposed Maxeon Solar Technologies, LTD, Solar Factory, Mesa del Sol Development, Albuquerque, Bernalillo County, New Mexico" and the "Testing Plan for LA 203524, Mesa del Sol, Maxeon Solar Project" prepared by Pathfinder Environmental, LLC to the New Mexico SHPO for review and comment. The report included the results of the Class I records search and Class III (100 percent) cultural resource pedestrian survey of the APE for the

Project. On October 12, 2023, the New Mexico SHPO concurred with the results and recommendation specified in the report and testing plan.

In early November 2023, Pathfinder Environmental, LLC, on behalf of Maxeon Americas Inc., completed the additional testing per the testing plan. The resulting report, "Cultural Resource Report: Addendum to NMCRIS 153855," is attached to this letter for your review (Attachment 4). LA 203524 is a surface scatter of flaked stone debris and the test excavations indicated that the site is 1–25 percent intact and has little potential for buried prehistoric cultural deposits. Manual excavation of the 12 50-cm x 50-cm test units did not yield evidence of cultural remains or buried cultural deposits. Based on these results, DOE is recommending site LA 203524 not eligible for the National Register of Historic Places (NRHP).

Determination of Effect

Based on the identification efforts described above, DOE has determined that there are no historic properties within the APE. Therefore, DOE is issuing a finding of No Historic Properties Affected for this undertaking.

Section 106 Next Steps

In accordance with Section 106, DOE is identifying other potential consulting parties to include the Applicant, Native American Indian Tribes that have an interest in the project area, local governments, historical societies, preservation organizations, and the Advisory Council on Historic Preservation (ACHP). Currently, DOE has identified the following Tribes and has invited them to consult on this project: Apache Tribe of Oklahoma; Comanche Nation, Oklahoma; Navajo Nation, Arizona, New Mexico & Utah; Pueblo of Isleta, New Mexico; and Pueblo of Laguna, New Mexico. DOE welcomes your input on other potential consulting parties. DOE will invite the potential consulting parties to participate in the Section 106 process.

We look forward to consulting with your office throughout the Section 106 process. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at (202) 913-3477 or email at donald.brown@hq.doe.gov.

The SHPO concurs with the determination of eligibility and finding of effect.

Respectfully,

John R Esten November 30, 2023; HPD log 121042
For the NM SHPO

Donald Brown
Environmental Compliance
Loan Programs Office