

APPLICATION FOR COUNTY SPECIAL USE PERMIT /  
STATE SPECIAL PERMIT

# Kūihelani Solar Phase 2 Project

Central Maui, Hawai'i

Tax Map Key: (2) 3-8-005:002-0003 (portion)



Kuihelani Solar Phase 2, LLC

October 2025

# Preface

This document has been prepared by Kuihelani Solar Phase 2, LLC, an affiliate of AES (AES or Applicant) in support of a request for a County Special Use Permit (CSUP) and State Special Permit (SSP) for the proposed Kūihelani Solar Phase 2 Project (Project).

As detailed in this document, the Project would involve construction and operation of a 40-megawatt (MW) ground-mounted solar photovoltaic and 160 MW-hour (MWh) battery energy storage system, as well as an electrical substation, switchyard, and other ancillary support facilities. The Project site,<sup>1</sup> which is located approximately 3 miles south of Kahului in Central Maui, comprises 476.303 acres of land owned by MP West LLC (Mahi Pono)<sup>2</sup> and is within the boundaries of the State of Hawai‘i’s agricultural land use district and the County of Maui’s agricultural zoning district. Based on the Land Study Bureau (LSB) soil classification system, the Project site includes approximately 365.493 acres of Class B soils and 110.810 acres of Class E soils; the Project would not involve construction of any facilities on LSB Class A soils. A map showing the Project location is contained in Appendix A.

Pursuant to Chapter 19.30A.060(A)(12) of the Maui County Code (MCC), solar energy facilities within the county agricultural zoning district that exceed 15 acres in size are considered a special use, which requires CSUP approval by the Maui Planning Commission. Pursuant to Chapter 205-2(d)(6) of the Hawai‘i Revised Statutes (HRS), solar energy facilities that occupy more than ten percent of a parcel or 20 acres of land comprising LSB Class B or C soils are an allowable use within the state agricultural district with the issuance of an SSP; as the land area in question is greater than 15 acres, the SSP requires review by the Maui Planning Commission as well as approval by the State Land Use Commission (LUC) pursuant to HRS Chapter 205-6(d).

As specified in MCC Chapter 19.510.010, a consolidated application may be filed and a single public hearing held for all permits and approvals required for a project. This application document (with associated attachments) addresses the issues pertaining to both a CSUP/SSP and contains all content requirements listed in MCC Chapter 19.510.010(D) per the table below; the required attachments are contained in Appendix A. The application is organized in accordance with Maui’s Automated Planning & Permitting System (MAPPS); Appendix B contains a crosswalk table specifying which section(s) of the application pertains to each question in MAPPS. As detailed throughout this document, the Project complies with the requirements for solar energy facilities in both the county agricultural zoning district and state agricultural land use district, including provisions for compatible agricultural activities and future decommissioning of the Project, pursuant to HRS Chapter 205-4.5(a)(21). Furthermore, it meets the criteria for both a CSUP/SSP as required by MCC Chapter 19.510.070 and Hawai‘i Administrative Rules (HAR) Section 15-15-95, respectively.

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<sup>1</sup> The Project site, which is the subject of this request for a County Special Use Permit (CSUP) and State Special Permit (SSP), may also be referred to as the permit area and/or petition area for the State Special Permit under HRS Chapter 205-6.

<sup>2</sup> MP West LLC’s sole member is Mahi Pono Holdings LLC (see Appendix A4).

As part of the request for CSUP/SSP approval, AES respectfully requests that the permit specifically include the provisions described below.

- The power generated by the Project would be sold to Maui Electric Company, Ltd. (Maui Electric)<sup>3</sup> under a power purchase agreement (PPA) to be approved by the Hawai'i State Public Utilities Commission (PUC); a new switchyard and associated interconnection lines located within the Project site would facilitate interconnection with Maui Electric's island-wide electrical grid. The switchyard and interconnection lines would be constructed by AES as part of the Project; following construction, ownership of the switchyard and interconnection lines would be transferred to Maui Electric, along with all related operations and maintenance responsibilities. As such, AES respectfully requests that any approval of this CSUP/SSP application include a condition that the future transfer of the switchyard and interconnection lines to Maui Electric following construction is authorized and approved, such that subsequent approval would not be required upon transfer, provided that Maui Electric and AES submit to the County of Maui Planning Department and LUC a letter confirming (1) the date of the transfer and (2) that upon transfer, Maui Electric would comply with all CSUP/SSP terms and conditions applicable to the switchyard and interconnection lines and would be solely responsible for compliance with such terms and conditions.
- The Project requires a permit term of 30 years. This permit duration is necessary to accommodate the following:
  - Pre-development: Pre-development activities may include, but are not necessarily limited to, securing ministerial State and County permit approvals and completing construction while also allowing adequate time to accommodate potential unanticipated delays as encountered by similar past and current utility-scale renewable energy projects (e.g., COVID-19 pandemic, catastrophic events, as well as state and federal policy changes).
  - Project operation: The term of the PPA with Maui Electric, which will define the operational period for the Project, is expected to be a minimum of 20 years subject to approval by the Public Utilities Commission (PUC).<sup>4</sup> An additional PPA may be exercised by Maui Electric with approval by the PUC to further extend the operational period of the Project for any remaining time within the permit term.
  - Decommissioning: Decommissioning activities would be completed in accordance with the approach described in Section 3.7.

AES has secured a commitment from the landowner that enables site control for the duration of the Project permit term (see Appendix A5). The required Project permit term is also consistent with other special use permits issued on Maui and throughout the state for similar utility-scale renewable energy projects including Ho'ohana Solar 1 (O'ahu, 43 years), Kuihelani Solar + Storage (Maui, 38 years), and Mahi Solar (O'ahu, 39 years).

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<sup>3</sup> Hawaiian Electric Company Inc. (Hawaiian Electric) is Hawaii's largest electric utility, serving customers on O'ahu, Maui, Lāna'i, Moloka'i, and Hawai'i Island. Maui Electric, a subsidiary of Hawaiian Electric, operates Maui's island-wide grid. This application references Maui Electric as the operational entity on Maui and Hawaiian Electric as the parent company and statewide utility.

<sup>4</sup> The PPA for the Project is tentatively expected to be filed by Maui Electric with the PUC in Q4 2025.

### MCC Chapter 19.510.010(D) Permit Application Content Requirements

Requirement	Section of Application
Documents which identify the owner of the subject parcel of land and the signature or written authorization for the application by the owner	Appendix A4
Owner's name, address and telephone numbers	Appendix A4
Agent's name, address and telephone numbers	Project Summary
Tax map key number of the parcel and its street address	Project Summary
Locational map identifying the site, adjacent roadways, and identifying landmarks	Appendix A1
List of owners and lessees of record located within a five-hundred-foot distance from the parcel	Appendix A7
Policies and objectives of the General Plan; the provisions of the community plan applicable to the application; the provisions of the applicable district; and an analysis of the extent to which the application, if granted, conforms to these policies, objectives and provisions	Section 10.2.1
Detailed land use history of the parcel to include former and existing state and county land use designations, violations, and uses	Section 4.1
Preliminary archaeological and historical data and comments from the Department of Land and Natural Resources (DLNR) and Office of Hawaiian Affairs (OHA), and if applicable, a preservation/mitigation plan approved by DLNR and OHA	Section 6.1.1
Analysis of the secondary impacts of the proposed use on surrounding uses which includes, but is not limited to, increases in property value, populations, housing, community services and facility needs, secondary jobs and employment generated, and compatibility with surrounding uses, and if applicable, affordable housing program and comments from the Department of Housing and Human Concerns and other mitigation plans and comments from the respective governmental and community services agencies	Section 6.5
Traffic impact analysis and, if applicable, a traffic master plan, which includes, but is not limited to, comments from the Department of Transportation and Department of Public Works (DPW)	Section 7.4
If applicable, an assessment of the impact which the proposed use may have on agricultural use of the parcel which includes, but which is not limited to, a feasibility analysis of potential agricultural uses suited to the site and written comments from the Department of Agriculture and the U.S. Soil Conservation Service	Section 6.4.1.2
Water source, supply and distribution analysis which includes, but is not limited to, methods of irrigation existing on the parcel and proposed for the application, location and use of groundwater and nonpotable water sources, and, if applicable, a water master plan, which includes but is not limited to, comments from the DLNR, DPW, Department of Environmental Management (DEM), and Department of Water Supply (DWS)	Section 7.1
Sewage disposal analysis, a description of a proposed method of sewage disposal, and comments, if applicable, from the Department of Health (DOH), DLNR, DPW, DEM, and DWS	Section 7.2
Solid waste disposal analysis, a description of a proposed method of solid waste disposal and comments, if applicable, from DOH, DLNR, DPW, DEM, and DWS	Section 7.6

Requirement	Section of Application
Identification of environmentally sensitive areas, habitat and botanical features which include, but are not limited to, wetlands, streams, rock outcroppings, endangered plants and animals, and exceptional trees, if applicable, a baseline study and preservation/mitigation plan and comments from DLNR, U.S. Fish and Wildlife Service (USFWS), and U.S. Army Corps of Engineers (USACE)	Sections 6.3.1; Appendix Q
Identification of the existing topographical and drainage patterns existing on the subject parcel and any proposed alterations to these patterns	Sections 5.1 and 7.3
Identification of all meetings held between the applicant and any community or residential group which may be impacted by the applicant's request, the issues raised by these meetings, and any measures proposed by the applicant to deal with or to mitigate these issues	Section 9
Photographs of the subject site or structure which are dated	Appendix C
Development schedule	Section 3.8
Schematic site development plans, if applicable, drawn to scale	Appendix D
Operations and management of the proposed use which includes, but is not limited to, number of employees, proposed employee housing plan, hours of operation, fees charged to residents and visitors, provisions for off-site parking	Section 3.6
Identification of traditional beach and mountain access trails and additional trails which may be required for public access to the beaches and mountains, and if applicable, preservation/mitigation plan and comments from the DLNR and OHA	Section 6.1.3
Identification and assessment of chemicals and fertilizers used, including but not limited to, detailing effects upon surface, underground and marine water resources and neighboring properties and surrounding flora and fauna, and if applicable, a mitigation plan and maintenance program and schedule, and comments from the DOH, DLNR, USFWS, and U.S. Environmental Protection Agency (EPA)	Section 6.4.2

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# Abbreviations and Acronyms

AC	alternating current
AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawai'i
amsl	above mean sea level
AMP	archaeological monitoring plan
APLIC	Avian Power Line Interaction Committee
Applicant	Kuihelani Solar Phase 2, LLC
A&B	Alexander & Baldwin
BMP	best management practice
CIA	Cultural Impact Assessment
CO <sub>2</sub>	carbon dioxide
CSUP	County Special Use Permit
CZM	Coastal Zone Management
DAGS	Department of Accounting and General Services
DAR	Hawai'i Division of Aquatic Resources
DC	direct current
DEM	Department of Environmental Management
DHHL	Department of Hawaiian Homelands
DLNR	Department of Land and Natural Resource
DOA	Hawai'i Department of Agriculture
DOFAW	State of Hawai'i DLNR Division of Forestry and Wildlife
DOH	State of Hawai'i Department of Health
DPW	Maui County Department of Public Works
DWS	Department of Water Supply
EPA	U.S. Environmental Protection Agency
ERCPC	Emergency Response and Communication Plan
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps

GCP	Grid Connection Point
GPR	Ground Penetrating Radar
GSU	generation step-up
HAR	Hawai'i Administrative Rules
HARC	Hawai'i Agriculture Research Center
Hawaiian Electric	Hawaiian Electric Company, Inc.
HCEI	Hawai'i Clean Energy Initiative
HC&S	Hawaiian Commercial & Sugar Company
HDOT	State of Hawai'i Department of Transportation
HEER	Hazard Evaluation and Emergency Response
HILT	Hawaiian Islands Land Trust
HRS	Hawai'i Revised Statutes
Hz	hertz
IAL	Important Agricultural Lands
IGP	Integrated Grid Plan
IPP	Independent Power Producers
ISO	International Organization for Standardization
KPP	Kahului Power Plant
kV	kilovolt
LCA	Land Commission Awards
LID	low impact development
LSB	Land Study Bureau
LEPC	Local Emergency Planning Committee
LOI	Letter of Interest
LPP	Living Pono Project
LUC	State Land Use Commission
LW	sound power level
MAPPS	Maui's Automated Planning & Permitting System
Maui Electric	Maui Electric Company, Ltd.
MCC	Maui County Code
MLIBC	Maui Lana'i Island Burial Council
MPP	Mā'alaea Power Plant
MVA	megavolt-amp
MW	megawatt

MWh	MW-hour
NCT	Notice Criteria Tool
NEC	National Electric Code
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHD	National Hydrography Dataset
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
NWR	National Wildlife Refuge
OGG	Kahului Airport
OP	observation points
POI	point of interconnection
PPA	Power Purchase Agreement
Project	Kūihelani Solar Phase 2 Project
PUC	Public Utilities Commission
RFP	Request for Proposal
ROCC	Remote Operations Control Center
RPS	Renewable Portfolio Standard
SCADA	supervisory control and data acquisition
SHPD	State of Hawai'i Historic Preservation Division
SGHAT	Solar Glare Hazard Analysis Tool
SIHP	State Inventory of Historic Properties
SMA	Special Management Area
SPCC	Spill Prevention Control and Countermeasure
SSP	State Special Permit
SWPPP	Stormwater Pollution Prevent Plan
TIAR	Traffic Impact Analysis Report
TMK	tax map key
TMP	Traffic Management Plan
UL	Underwriters Laboratories
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

# Project Summary

<b>Project Name</b>	Kūihelani Solar Phase 2 Project
<b>Tax Map Key (TMK) Parcel Number</b>	(2) 3-8-005:002-0003 (portion)
<b>Requested Permits</b>	County Special Use Permit (CSUP) and State Special Permit (SSP)
<b>Project Description</b>	The proposed Project consists of construction and operation of an approximately 40 megawatt (MW) ground-mounted solar photovoltaic system coupled with a 160 MW-hour battery energy storage system, as well as a Project substation, Maui Electric switchyard and associated interconnection equipment, and other ancillary facilities, approximately 3 miles south of Kahului in Central Maui. The Project would help to achieve the state’s renewable energy goals and would supply a meaningful portion of Maui’s energy needs at a fixed price for the duration of the Power Purchase Agreement (PPA) term. In addition to providing clean, renewable energy, the Project site would also be used for compatible agricultural activities.
<b>Lot Acreage</b>	3,898.056 acres
<b>Project Site Acreage</b>	476.303 acres
<b>Project Valuation</b>	\$241 million
<b>State Land Use District</b>	Agricultural
<b>Land Study Bureau (LSB) Classification</b>	LSB Class B (365.493 acres) and LSB Class E (110.810 acres)
<b>County Zoning District</b>	Agricultural
<b>Maui Island Plan Designation</b>	Outside Urban Growth Boundary
<b>Kīhei-Mākena Community Plan Land Use Designation</b>	Agriculture and Project District 11 (Mā’alaea Village), with small inclusion of Open Space along southern edge
<b>Draft South Maui Community Plan Land Use Designation<sup>1/</sup></b>	North Kīhei Subarea 2: Agriculture, with Open Space along Pale’a’ahu Gulch and Pōhākea Gulch
<b>Applicant</b>	Kuihelani Solar Phase 2, LLC 1003 Bishop Street, Suite 1600 Honolulu, Hawai’i 96813 Attn: Michael Jenkins michael.jenkins@aes.com
<b>Agent</b>	Tetra Tech, Inc. 737 Bishop Street, Suite 2000 Honolulu, Hawai’i 96813 Attn: Lisa Kettley lisa.kettley@tetrattech.com
<b>Consultant</b>	Munekiyo and Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawai’i 96793 Attn: Gwendolyn Rivera planning@munekiyohiraga.com

<sup>1/</sup> An update to the Kīhei-Mākena Community Plan (County of Maui 1998) is currently in progress. Adoption of the updated plan is expected to occur after this permit application has been submitted. However, anticipating plan adoption, this application addresses consistency with both the current Kīhei-Mākena Community Plan as well as the Draft South Maui Community Plan (dated May 2025).

# 1 General Project Information

*This section addresses the general information requirements as specified in Section IA of Maui's Automated Planning & Permitting System (MAPPS) for a CSUP/SSP.*

<b>1. Requested Permits</b>	County Special Use Permit (CSUP) State Special Use Permit (SSP1; 15 acres or more)
<b>2. Permit Application Numbers</b>	Not known
<b>3. Maui County Agency Project</b>	No; Project is not a Maui County agency project
<b>4. Project Name</b>	Kūihelani Solar Phase 2 Project
<b>5. Total Lot Acreage</b>	3,898.056 acres
<b>6. Project Site Acreage</b>	476.303 acres
<b>7. Valuation of Project</b>	\$241,000,000
<b>8. Project Location</b>	Approximately 3 miles south of Kahului, Central Maui
<b>9. Landowner</b>	MP West LLC (Mahi Pono)
<b>10. Existing Use of Project Site</b>	Fallow agricultural fields (former sugarcane plantation)
<b>11. Proposed Use</b>	Solar photovoltaic and battery energy storage system with compatible agricultural activities
<b>12. Onsite Parking Spaces</b>	None
<b>13. Proposed Parking Spaces</b>	None (Project does not include centralized parking facility but would include parking areas within substation/switchyard)
<b>14. Building Permit Application Number</b>	Not applicable
<b>15. Project Work Conducted to Date</b>	No (proposed Project work has not started)
<b>16. After The Fact Use or Work</b>	Not applicable

# 2 Project Background and Purpose

*This section addresses the information requirements related to the desired use as specified in Section IB(1) of MAPPs for a CSUP/SSP.*

Kuihelani Solar Phase 2, LLC, an affiliate of AES (AES or Applicant) is proposing the Kūihelani Solar Phase 2 Project (Project) on the island of Maui, Hawai‘i. The Project involves construction and operation of a solar photovoltaic and battery energy storage system approximately 3 miles south of Kahului in Central Maui, near the existing Kūihelani Solar + Storage Project.<sup>5</sup> The Project site encompasses 476.303 acres within a portion of tax map key (TMK) 3-8-005:002-0003, which is owned by MP West LLC (Mahi Pono). The Project location and TMK boundaries are shown in Figures 1 and 2.

The Project is necessary to achieve the State of Hawai‘i’s Renewable Portfolio Standard (RPS) energy goals of generating 100 percent of the state’s energy from renewable sources, as well as to offset the loss of power generation resulting from the planned retirement of fossil fuel-fired generating units at the Kahului Power Plant and Mā‘alaea Power Plant. In doing so, the Project would be consistent with Governor Green’s Executive Order No. 25-01 (*Accelerating Hawaii’s Transition Toward 100 Percent Renewable Energy*) and would help to achieve the objectives and policies of the Maui County General Plan promoting the use of alternative energy sources.

The Project would include an approximately 40-megawatt (MW) ground-mounted solar photovoltaic system plus 160 MW-hour (MWh) battery energy storage system, as well as an electrical substation, switchyard and other ancillary facilities. Access to the Project site would be via existing privately-owned roads extending from Kūihelani Highway, Maui Veterans Highway, and North Kīhei Road (see Figure 3). The power generated by the Project would be sold to Maui Electric Company, Ltd. (Maui Electric) under a power purchase agreement (PPA), which requires Hawai‘i State Public Utilities Commission (PUC) approval.<sup>6</sup> The Project would interconnect with Maui Electric’s island-wide electrical grid via the proposed switchyard with interconnection lines extending to two existing Maui Electric transmission lines that transect the Project site. The switchyard and interconnection lines would be constructed by AES as part of the Project, with ownership transferred to Maui Electric following construction.<sup>7,8</sup> The Project site would be secured for use through a long-term lease agreement with landowner Mahi Pono.<sup>9</sup>

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<sup>5</sup> The existing AES Kūihelani Solar + Storage Project, which was issued a County Special Use Permit in 2021 [CUP 2021/0003]), began commercial operations in May 2024. If approved, the proposed Kūihelani Solar Phase 2 Project would be operated independently from the Kūihelani Solar + Storage Project under a separate PPA.

<sup>6</sup> The PPA for the Project is tentatively expected to be filed by Maui Electric with the PUC in Q4 2025.

<sup>7</sup> This application uses the term “switchyard;” Maui Electric also refers to this as a “switching station.”

<sup>8</sup> As the switchyard and interconnection lines would be constructed by AES within the Project site and are needed to prepare the Project’s energy output for interconnection, they have been included in this CSUP/SSP application. Following construction, ownership of these facilities would be transferred to Maui Electric, along with all related operations and maintenance responsibilities.

<sup>9</sup> Maui Electric would enter into a long-term easement agreement with Mahi Pono for the switchyard and interconnection lines.

In addition to using the Project site for generation and storage of solar energy, AES would also enter into a long-term agreement with a local agricultural partner to conduct compatible agricultural activities within the Project site.

The Project would be owned and operated by Kuihelani Solar Phase 2, LLC, a Delaware limited liability company and an affiliate of AES. AES has a proven track record in the development and operation of solar energy facilities throughout the state, with five operational facilities providing more than 135 MW of generating capacity and an additional five facilities with nearly 300 MW of generating capacity in development.

## 2.1 Background Information

In 2001, Hawaii established the United States' first Renewable Portfolio Standard (RPS) goal, codified in Hawai'i Revised Statutes (HRS) Chapter 269-92. The goal was turned into an enforceable standard in 2004 and has been updated numerous times since, including the first nationwide 100% RPS mandate in 2015. The RPS specifies that the electric utility companies that sell electricity for consumption in Hawai'i are required to use renewable energy for the equivalent of 30 percent of net electricity generation by 2020, 40 percent by 2030, 70 percent by 2040, and 100 percent by 2045.

In 2008, the State of Hawai'i and the U.S. Department of Energy entered into a Memorandum of Understanding, establishing the Hawai'i Clean Energy Initiative (HCEI) to address Hawai'i's heavy dependence on imported fossil fuels and increase the amount of locally produced renewable energy. The HCEI provided a regulatory framework to address the various systems that govern energy planning and delivery within the state (DBEDT 2019).

To help achieve the state's RPS requirements, Hawaiian Electric issued a *Request for Proposals for Renewable Dispatchable Generation and Energy Storage for Maui* (RFP; Docket No. 2017-0352) in January 2023 (Hawaiian Electric 2023a). This RFP was part of the third stage of a competitive procurement process (Stage 3 RFP) for renewable energy developers to provide utility-scale renewable generation to the Hawaiian Electric system. The RFP included specific criteria for potential projects, including available points of interconnection with Maui Electric's grid based on existing system capacity. Based on responses to this RFP, in December 2023, Hawaiian Electric selected a total of four projects on Maui, including the proposed Kūihelani Solar Phase 2 Project. All projects selected through the Hawaiian Electric RFP process require subsequent approval of a PPA by the PUC; the PPA for the Project is tentatively expected to be filed by Maui Electric with the PUC in Q4 2025, with the necessary review and approval process to follow.

In parallel with the Stage 3 RFP process, Hawaiian Electric implemented a process to identify the pathway to achieve the requirements of the State's RPS that incorporates resource, transmission, and distribution planning to optimize the integration of both distributed and utility-scale resources while also addressing system reliability and resiliency. The resulting Integrated Grid Plan (IGP), approved by the PUC in March 2024, provides a long-term strategy and near-term action plan to meet the state's clean energy needs up to and beyond 2045. In addition to meeting the RPS requirements of 100 percent renewable energy by 2045, the IGP also commits to reducing electricity-sector greenhouse gas emissions to 70 percent of 2005 levels by 2030 and reaching net-zero carbon emissions by 2045. The

action plan presented in the IGP highlights the importance of both customer rooftop solar and distributed storage, as well as utility-scale renewable energy projects. Systemwide, the plan calls for the near-term addition of 1,145 MW of solar and wind energy generation and 1,259 MW of energy storage. Specifically for the island of Maui, the identified resource needs include 62 MW of customer rooftop solar and 103 MW of utility-scale solar and energy storage or wind projects by 2035. The importance of these resource additions is underscored by the mandate to retire existing fossil fuel-fired generating units at Maui Electric's Kahului Power Plant (KPP; Units 1-4) and Mā'alaea Power Plant (MPP; Units 10-13) by 2027 to comply with regional air quality rules, as well as the remaining MPP generating units (Units 1-9) by 2030 due to the lack of replacement parts for maintenance (Hawaiian Electric 2023b).

## 2.2 Project Purpose and Benefits

Collectively, the HCEI and the State of Hawai'i's RPS establish the need to reduce Hawai'i's dependence on imported fossil fuels and increase the amount of locally produced renewable energy. The need for development and implementation of renewable energy projects is further demonstrated by the commitments detailed in Hawaiian Electric's IGP and RFP documentation (Hawaiian Electric 2023a; Hawaiian Electric 2023b), as well as Governor Green's Executive Order No. 25-01 (*Accelerating Hawaii's Transition Toward 100 Percent Renewable Energy*; State of Hawai'i 2005).

The purpose of the Project is to construct and operate facilities on land owned by Mahi Pono in Central Maui that would generate and store electricity derived from solar resources, thereby providing clean, renewable energy for the island of Maui. The Project would help to meet the state's need for renewable energy by providing up to 40 MW of solar energy and 160 MWh of battery storage, which is enough to provide electricity for the equivalent of approximately 18,425 homes annually (based on average energy use). In doing so, it would directly contribute to the state's renewable energy goals and would supply a meaningful portion of Maui's energy needs for the duration of the contract term. The solar energy from the Project would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. Furthermore, the Project's fixed-price PPA offers a stable and predictable cost for energy over the long term, helping to hedge against future price volatility associated with fossil fuel-based power. The Project would also help to meet the specific needs of Maui Electric's island-wide electrical system by providing dispatchable stored solar energy, thus offsetting night-time fossil fuel generation, improving grid stabilization, and replacing lost generation capacity associated with the impending retirement of the Kahului and Mā'alaea power plants. Overall, it is estimated the Project would generate or sustain up to approximately 1,541 total jobs in Hawai'i, \$89.6 million in labor income, and total economic output of \$251.9 million.

# 3 Project Description

*This section addresses the information requirements related to the scope of the proposed project as specified in Section IB(2) of MAPPS for a CSUP/SSP.*

The proposed Project involves construction and operation of an approximately 40 MW ground-mounted solar photovoltaic system coupled with a 160 MWh battery energy storage system, as well as a Project substation, Maui Electric switchyard<sup>10</sup> and associated interconnection lines, and other ancillary facilities. Section 3.1 describes the proposed location of the Project and Section 3.2 summarizes the Project siting and design refinement process. Sections 3.3 and 3.4 describe the major Project components and associated compatible agricultural activities, respectively. Proposed construction, operations and maintenance, and decommissioning activities are described in Sections 3.5 through 3.7. The anticipated development schedule is summarized in Section 3.8.

## 3.1 Project Location

The area to be used by AES for the Project and is the subject of this CSUP/SSP permit request (hereafter referred to as “Project site”) is 476.303 acres in size and occupies the southwestern portion of TMK (2) 3-8-005:002-0003, which is owned by Mahi Pono (acquired from Alexander & Baldwin, Inc. [A&B]).<sup>11</sup> In total, this parcel comprises approximately 3,898.056 acres, spanning between Kūihelani Highway and Maui Veterans Highway on Maui’s central isthmus (see Figure 2 and Appendix A3).

As further discussed in Section 4.1, the Project site is comprised of fallow agricultural fields which were part of the former Hawaiian Commercial & Sugar Company (HC&S) plantation, an extensive area cultivated with sugarcane for more than 100 years until A&B ceased commercial operations in 2016, then subsequently sold to Mahi Pono. The surrounding areas also consist of former HC&S plantation lands, some of which have since been recultivated by Mahi Pono. In addition, the Project site is bordered to the north by the AES Kūihelani Solar + Storage Project and to the south by Mā’alaea Power Plant, beyond which is Keālia Pond National Wildlife Refuge. Waikapū Stream, which flows south toward Keālia Pond, is located approximately 650 feet east of the Project site. The Project site falls entirely within the County of Maui’s Kīhei-Mākena Community Plan area.<sup>12</sup>

Access to the Project site would be via a combination of existing privately-owned roads that extend to the Project site from Maui Veterans Highway, Kūihelani Highway, and North Kīhei Road (Figure 3).<sup>13</sup> The

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<sup>10</sup> It is understood that Maui Electric intends to name this the Moku ‘Alae switchyard (or switching station).

<sup>11</sup> Metes and bounds of the Project site are provided in the site development plan set (Sheet 4; Appendix D).

<sup>12</sup> Maui County is currently updating the Kīhei-Mākena Community Plan (1998); the updated plan has been renamed as the South Maui Community Plan. Additional detail regarding the current and draft community plan update is provided in Section 10.2.1.

<sup>13</sup> Authorization to utilize these roadways has been provided by Mahi Pono, subject to the necessary land use approvals and execution of a final lease agreement (Appendix A6).

existing access point on Maui Veterans Highway is a signalized intersection approximately 3.5 miles northeast of the Project site; Cane Haul Road is an approximately 25-foot-wide former plantation road that extends from this intersection to the Project site through land owned by Mahi Pono as well as a small parcel retained by A&B. The existing access point from Kūihelani Highway, which provides right-in and right-out access only, is located approximately 0.8 miles north of the Project site; this access point services the existing AES Kūihelani Solar + Storage Project and would also provide access to the Kūihelani Solar Phase 2 Project. The two existing access points from North Kīhei Road are located southwest of the Project site; former plantation roads, referred to as South 8<sup>th</sup> and 9<sup>th</sup> Streets,<sup>14</sup> extend from these access points into the Project site. As further discussed in Section 7.4, construction worker access would be via a combination of these four existing access points; equipment delivery would be primarily via the access points along North Kīhei Road.

Representative photographs of the Project site are provided in Appendix C.

## 3.2 Project Siting and Design Refinement

The area proposed for the Project is located on the western edge of Mahi Pono’s land holdings in Central Maui, which include approximately 41,000 acres of former sugarcane fields acquired from A&B in 2018. Mahi Pono is implementing a diversified agricultural master plan for these lands involving extensive crop cultivation and livestock production; to date, approximately 22,000 acres have been put back into active agricultural operations (Mahi Pono 2025). In addition to diversified agriculture, Mahi Pono set aside land for renewable energy that is peripheral to their ongoing and planned agricultural activities. The area provided by Mahi Pono is highly suitable for solar energy generation based on its proximity to the existing Maui Electric grid infrastructure, distance from nearby homes and communities, site accessibility, and relatively flat topography, all of which help to minimize the need for additional infrastructure and overall impact to surrounding areas. Furthermore, the existing Maui Electric 69kV transmission lines that traverse this area were specifically identified by Hawaiian Electric in their Stage 3 RFP as some of the only grid facilities on the island with sufficient capacity to accommodate a utility-scale renewable energy project.<sup>15</sup>

Working within the area provided by Mahi Pono for renewable energy, AES proactively engaged in an iterative siting and design process to minimize potential impacts to the surrounding environment and nearby communities. This process was initiated with due diligence studies across an overall Project study area comprising approximately 730 acres and incorporated stakeholder input to date. By deliberately studying a larger area than required for the proposed facilities, this approach provided increased flexibility to responsibly site the Project, avoid sensitive features, and minimize potential impacts. Through this

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<sup>14</sup> Certain documents also refer to South 8<sup>th</sup> Street and 9<sup>th</sup> Street as Upper Mā’alaea Road and Lower Mā’alaea Road, respectively. South 8<sup>th</sup> Street (Upper Mā’alaea Road) joins with Cane Haul Road within the Project site.

<sup>15</sup> In the Stage 3 RFP, Hawaiian Electric identified existing transmission lines and utility substations which could accept energy from proposed utility-scale projects, each with a capacity rating. For each transmission line, Hawaiian Electric also identified a maximum “single point of failure,” which determines the maximum possible generation capacity (Hawaiian Electric 2023b).

process, the Project was sited to (1) maximize the setback from Waikapū Stream, (2) maintain a 200-foot buffer around Pale‘a‘ahu Gulch and Pōhākea Gulch, and (3) avoid other sensitive environmental areas such as flood hazard zones.<sup>16</sup> Project siting efforts also sought to minimize visibility of Project equipment from nearby roadways and other publicly accessible locations, resulting in an increased setback from Kūihelani Highway and North Kīhei Road. Subsequent refinement of the Project design involved detailed analysis and integration of the existing site topography, hydrologic conditions, and onsite road network, with a focus on minimizing the extent of grading and other ground disturbance required for Project construction. Furthermore, design refinement efforts sought to strategically site the solar photovoltaic modules, batteries, and interconnection facilities in a manner that maximizes Project output (based on energy capture and transmission losses) and minimizes overall footprint (based on layout efficiency).

Through these efforts, as illustrated in Figure 4, the initial Project study area was reduced by approximately 35 percent, resulting in the current Project site (476.303 acres). The Project layout, which maximizes effective use of the Project site, is shown in Figure 5. As further detailed in the following section, the fenced area containing the solar photovoltaic and battery energy storage system would comprise approximately 250 acres.<sup>17</sup>

### 3.3 Proposed Components

The major components of the Project include the following: (1) solar photovoltaic system, (2) power conversion stations and battery energy storage system, (3) network of electrical collector lines, (4) Project substation, (5) Maui Electric switchyard and interconnection lines, (6) onsite storage containers, (7) communication equipment, and (8) internal access routes and fencing. Each of these components is described below and generally shown in Figure 5; additional detail is provided in the site development plan set provided in Appendix D.

The Project design and layout reflects the anticipated component specifications, based on the best available information derived from AES’ long-standing relationships with product vendors. However, it is important to note that new generations of equipment are introduced on a routine basis; equally important is the influence of macro-economic forces and governmental actions on the solar and battery industries, along with their supply chains. As such, the component specifications may evolve over the course of the Project development process to incorporate technological advances in safety and efficiency, as well as to reflect equipment availability. While the general characteristics of the

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<sup>16</sup> Based on the location of Maui Electric’s existing 69kV transmission lines, which were identified by the utility as potential grid connection points, the interconnection lines for the Project would cross into the 200-foot buffer for the gulches as well as a flood hazard zone (Zone A). The proposed interconnection route was designed to achieve a distance from the Maui Electric switchyard to the existing transmission lines that minimizes overall length while adhering to utility specifications. In addition, the lines are sited adjacent to an existing access route, thus limiting ground disturbance and providing efficient maintenance access. All other Project equipment has been sited to avoid these areas.

<sup>17</sup> The fenced area would include the entire solar photovoltaic system, battery energy storage system, and Project substation; Maui Electric’s switchyard and interconnection lines as well as some civil improvements (e.g., internal access routes and stormwater retention features) would be located outside the fenceline.

components are not expected to change, exact dimensions and/or quantities may vary, which in turn would affect the Project configuration and layout. In any case, refinements to the Project layout would be expected to be relatively minor, with the overall dimensions and footprint similar to (or less than) that described herein and shown in the site development plan set.

### 3.3.1 Solar Photovoltaic System

The solar photovoltaic system would consist of a series of 540- to 590-watt modules mounted on a racking system with single-axis trackers which would rotate along a fixed horizontal axis, from east to west, as the sun moves across the sky. Based on the current site layout, it is anticipated that the Project would include three solar array areas, ranging in size from approximately 50 to 120 acres. Within each solar array area, the modules would be organized in rows. Each row would be mounted on a racking system installed using steel posts, spaced approximately every 9 feet (varies) at depths of up to 11 feet (depending on specific soil conditions). The row-to-row spacing (measured from post to post) would be approximately 19 feet, with sufficient space around row groupings to allow for maintenance access, compatible agricultural uses such as grazing, and non-vegetated fire breaks. The maximum height of the system would be approximately 8 feet above ground surface when the panels are in the stow position (flat). As the panel rotate, their highest point would reach a maximum of approximately 11 feet above ground surface; this maximum tilt height would only occur for a brief time at dawn and dusk.

The modules would produce low-voltage, direct current (DC) electricity. Within each solar array area, the DC electricity from the modules would be transmitted via DC electrical wiring to central inverters (rated from 2.8 - 5.5 MW), where it would be converted to alternating current (AC) electricity. The inverters would connect to step-up transformers, which would convert the inverter output to medium voltage electricity. The inverters and transformers would be located at a series of 24 power conversion stations distributed throughout the Project site (see Section 3.3.2 for more detail). The DC electrical wiring extending from the modules would be integrated into the above-ground portion of the trackers; at the terminus of each module row, the wiring would be consolidated and directed to the power conversion stations via underground trenching. The trenches would be approximately 1-3 feet wide and 3 feet deep, with some sections up to 10 feet wide to accommodate multiple circuits of electrical and communications wiring;<sup>18</sup> approximately 25,000 linear feet of trenching is anticipated for the low-voltage electrical wiring.

Safety features incorporated into the solar photovoltaic system would include mechanisms to allow for disconnection and rapid shutdown of the system, if needed; these would be installed throughout the solar arrays and would include DC disconnects (which would allow the DC current between the modules to be interrupted before reaching the inverters) and AC disconnects (which would separate the inverters from the electrical grid).

Representative photographs of the solar photovoltaic system are provided in Figure 6.

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<sup>18</sup> Placement of multiple electrical circuits in a trench requires adequate horizontal spacing for safety purposes; exact spacing is dependent on soil thermal resistivity and other site-specific conditions.

### 3.3.2 Power Conversion Stations and Battery Energy Storage System

The battery energy storage system would include a total of 24 battery units, each housing a series of lithium-ion batteries (arranged in 16 horizontal strings, with 9 modules per string [approximate]), collectively providing approximately 160 MWh of total storage. These battery units would be distributed throughout the Project site, with one battery unit at each of the 24 power conversion stations. The batteries would be charged with energy generated by the solar photovoltaic system and would allow the energy to be dispatched as needed to offset night-time customer demand and assist in grid stabilization. Each battery unit would be housed in one to two containers with maximum dimensions of approximately 10 feet (height) by 8 feet (width) by 40 feet (length). As further discussed in Section 3.3.9, each battery unit would incorporate multiple layers of protection to avoid failures and to contain potentially hazardous substances.

Each power conversion station would comprise two adjacent concrete or pile foundations – one to support the inverter and transformer (as described in Section 3.3.1) and one to support the battery unit – surrounded by a gravel perimeter. Various auxiliary and communication equipment (further described in Section 3.3.7) would also be co-located at the power conversion stations. In addition, meteorological monitoring stations and security monitoring equipment would be installed nearby. The meteorological stations, which would provide real-time meteorological data needed to optimize energy generation, would consist of equipment mounted on a steel pole (approximately 7-8 feet in height). The security monitoring equipment, consisting of security cameras, radar motion sensors, and audio alarm systems, would also be mounted on a steel pole (approximately 18-20 feet in height).

Representative photographs of a typical battery energy storage system and power conversion station are provided in Figure 7.

### 3.3.3 Electrical Collector System

The electricity generated and stored within each of the solar array areas would be transmitted from the power conversion stations to a Project substation via a network of medium-voltage electrical collector lines. Similar to the DC electrical wiring from the solar modules, the medium-voltage electrical collector lines would be installed primarily via underground trenching to mitigate potential fire risks. A few short spans of overhead electrical line (totaling approximately 1,700 – 2,000 linear feet) would be needed to facilitate connections within the Project site where trenching is restricted by existing utilities or onsite gulches. The trenches for the electrical collector lines would be approximately 2-6 feet wide and 4 feet deep, with some sections up to 20 feet wide to accommodate multiple circuits of wiring. In total, it is anticipated that the Project would include approximately 30,000 linear feet of trenching for the medium-voltage electrical collector lines.

### 3.3.4 Project Substation

The Project would include a substation, which would function to further increase the voltage of electricity to allow for integration into Maui Electric's island-wide electrical grid. The Project substation would occupy approximately 29,400 square feet (0.7 acre). Substation equipment would include free-

standing steel switch structures, two generation step-up (GSU) transformers, circuit breakers, pole structures and shield wiring, concrete foundations, and a containerized enclosure to house centralized controls for facility operation and monitoring, and various communication equipment (see Section 3.3.7), all underlaid with gravel and enclosed with security fencing. The tallest structure in the substation would be the shield wire mast (approximately 45 feet tall).

A representative photograph of the Project substation is provided in Figure 8.

### 3.3.5 Maui Electric Switchyard and Interconnection Lines

From the Project substation, two overhead electrical lines would connect to the adjacent Maui Electric switchyard to facilitate the transfer of electricity from the generation to transmission facilities. The switchyard would act as the point of interconnection (POI; i.e. the physical/electrical demarcation between the generation facility and Maui Electric's transmission infrastructure). It would be approximately 51,450 square feet (1.2 acres) and would contain electrical equipment, steel structures, circuit breakers, switches, poles structures and shield wiring, concrete foundations, communications and utility metering equipment, fiber optic communications lines and a station service line for auxiliary plant power,<sup>19</sup> and a control structure, all underlaid with gravel and enclosed with security fencing. The maximum structure height in the switchyard would be the shield wire mast (approximately 50 feet tall). A representative photograph of the switchyard is provided in Figure 8.

From the switchyard, interconnection lines would extend to two Grid Connection Points (GCPs), which are specific locations designated by Maui Electric for interconnection with their island-wide grid. The interconnection lines for each GCP would consist of two, three-phase high-voltage lines and associated shield wiring, configured as a parallel loop, with a minimum of 70 feet of physical separation, to allow for electricity to flow in both directions between the Project and Maui Electric's grid. The total span for each interconnection line would be approximately 1,900 linear feet (with a total loop line length of approximately 3,800 linear feet), with each loop line supported by a total of 12 steel poles. All of the poles would be steel monopoles with concrete, drilled-pier foundations or directly embedded into the ground and would be designed to comply with applicable codes and Maui Electric standards. The poles would range in height between 55 to 70 feet above ground, depending on terrain and span length. Based on Maui Electric specifications, bird diverters would be installed on the interconnection lines at approximately 15-foot increments.

The interconnection lines have been sited to minimize the overall distance needed to reach the designated GCPs. As shown in Figure 5, the lines would generally be located along either side of an existing plantation road (9th Street), extending to two existing Maui Electric transmission lines that transect the Project site. As Maui Electric prohibits work by any other entity within their energized electrical corridor, work to be conducted by AES would terminate at the nearest poles outside the

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<sup>19</sup> The station service line would connect from the Maui Electric switchyard to the Project substation to provide backup power to essential equipment at the solar facility (e.g., communications and control systems), ensuring they could operate even when the facility's generation is offline.

energized corridor; the remaining design and construction work to facilitate interconnection at each GCP would be conducted by Maui Electric.<sup>20</sup>

Following construction, ownership of the switchyard and interconnection lines would be transferred to Maui Electric, along with responsibility for all associated operations and maintenance activities. AES understands that the Maui Planning Commission and the State Land Use Commission (LUC) typically include as a condition of approval that the respective permits shall not be transferred without prior written approval. In this instance, AES respectfully requests that any approval of this CSUP/SSP application include a condition that the future transfer of the switchyard and interconnection lines to Maui Electric following construction is authorized and approved, such that no subsequent approval would be required upon transfer, provided that Maui Electric and AES submit to the County of Maui Planning Department and LUC a letter confirming (1) the date of the transfer, and (2) that upon transfer, Maui Electric would comply with all CSUP/SSP terms and conditions applicable to the switchyard and interconnection lines and would be solely responsible for compliance with such terms and conditions.

### 3.3.6 Storage Containers

Storage containers would be installed in the vicinity of the Project substation to provide dedicated space for Project-related storage, including spare materials/components. The storage containers would comprise up to two shipping containers, each measuring approximately 8 feet (width) by 40 feet (length) by 10 feet (height), with an underlying concrete pad. Additional spare materials and components may be stored in similar, re-utilized construction containers dispersed throughout the Project site. The storage containers would utilize electricity provided through the station service line for climate control and lighting. No sanitary wastewater or domestic water would be required for the storage containers.

### 3.3.7 Communication Equipment

Communication equipment would be installed to interface with Maui Electric's supervisory control and data acquisition (SCADA) system so that the electricity generated and stored by the Project can be regulated and dispatched remotely; communication equipment would also be installed in the Project substation and throughout the facility for operations and security purposes.<sup>21</sup> The Project would also include an emergency management system that would allow operations to be supervised and all system functions to be protected in response to real-time dispatch signals from Maui Electric, as well as report production data, energy forecasts, and other system health data. This equipment would be housed within the various inverters located on the power conversion stations, as well as within centralized control structure(s) within or adjacent to the substation and switchyard. Most of the communications

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<sup>20</sup> Detailed design information for the work within the energized electrical corridor would be included in Maui Electric's application to the PUC to interconnect the Project. This process is expected to be initiated by Maui Electric in late 2025 or early 2026.

<sup>21</sup> The specific telecommunications requirements to facilitate interaction between the Project and Maui Electric are currently being reviewed by Maui Electric and multiple Hawaii-based service providers.

equipment would be connected via cabling along the new interconnection lines, although some wireless features for inter-Project communications are being evaluated.

### 3.3.8 Internal Access Routes and Perimeter Fence

The Project would be accessed via existing privately owned roads that extend to the Project site from existing ingress/egress points on Maui Veterans Highway, Kūihelani Highway, and North Kīhei Road (Figure 3); these existing roads are sufficiently wide and do not require improvements. Within the Project site, a series of new internal access routes would be installed to accommodate construction vehicles and to allow ongoing access for operations and maintenance. These roads would generally have a compacted gravel and/or native material bed with a width of approximately 16 feet (plus 4-foot-wide shoulders on either side), as well as the required clearance and turning radius needed for emergency response vehicles in accordance with fire code.<sup>22</sup> The internal access routes would provide primary access to each of the solar array areas and power conversion stations, as well as the Project substation, switchyard and interconnection lines. The ample spacing between the rows of modules would allow for localized access within each of the solar array areas.

Fencing would be installed around the perimeter of the Project for general security purposes. The fence is expected to be approximately 7-foot-tall chain link (or similar); no barbed wire would be installed.<sup>23</sup> Gates would be installed for pedestrian and vehicular access. The total fenced portion of the Project site is expected to be approximately 250 acres.

### 3.3.9 Fire Prevention and Other Safety Features

The Project design incorporates multiple layers of monitoring and safety features to ensure safe operation of the system, including fire prevention and suppression as well as other safety considerations. As noted in the preceding sections, the Project would include an energy management system monitored by automated systems, on-site personnel, and a 24/7 Remote Operations Control Center (ROCC).<sup>24</sup> All system functions would be managed and protected in response to real-time dispatch signals from Maui Electric, as well as report production data, energy forecasts, and other system health data. The various components would include mechanisms to allow for disconnection and rapid shutdown of the system, if needed; these would be installed throughout both the solar arrays

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<sup>22</sup> The internal access routes for the substation and switchyard would be approximately 20-25 feet wide (plus 4 to 5-foot shoulders); those portions within the switchyard would use AC pavement, per Maui Electric's specifications. The area adjacent to the substation and storage facility would also include compacted gravel (approximately 90-100 feet wide) to accommodate the turning radius of larger vehicles, equipment staging, and parking for Project operations and Maui Electric staff.

<sup>23</sup> An approximately 8-foot-tall chain link fence with barbed wire (or similar) would surround the switchyard in accordance with Maui Electric's security specifications.

<sup>24</sup> AES has three ROCCs that monitor and respond to emergencies based on regional and site-specific requirements. In the event of an emergency, the Project's designated ROCC would track notifications from multiple sources (e.g., SCADA alarms, internal/external phone calls, and third-party monitoring services) for emergencies originating both within and outside the Project site. The ROCC would coordinate support from field service personnel, local authorities, and other AES experts until the emergency is deemed under control.

(with DC and AC disconnects to shut off the flow of current between the modules/inverters and inverters/electric grid, respectively) as well as the battery energy storage system (to isolate the battery units from the solar arrays and electrical grid).

Furthermore, the battery energy storage system design incorporates multiple and redundant layers of hazard controls, including passive and active measures that both inhibit and (when necessary) suppress hazardous conditions. The battery modules would be installed within fully contained, leak-proof steel enclosures equipped with fire-rated insulation, as well as temperature and smoke sensors and alarms, integrated monitoring and circuit protection, a self-contained thermal management system, an explosion prevention and mitigation system, and a fire detection and thermal runaway propagation protection system specifically designed for lithium-ion battery energy storage systems. Independent testing of the battery system would be conducted prior to commercial operation, and the battery energy storage design would achieve UL 9540 certification prior to commercial operation.<sup>25</sup>

Beyond the battery energy storage system design, the Project would also incorporate a variety of other fire prevention and suppression measures, including those listed below.

- The Project design would comply with National Fire Protection Association (NFPA) 1 and National Electric Code (NEC) requirements for fire prevention for utility-scale solar facilities, including installation of non-vegetated fire breaks.
- Electrical wiring would generally be elevated, underground, or enclosed, thus minimizing interaction between circuits and flammable materials.
- A minimum 30-foot non-vegetated fire break would be installed around the perimeter of the Project site as well as the various electrical equipment (e.g., a 20-foot buffer within the fence line and 10-foot buffer outside the fence line). Vegetation management would occur along the overhead electrical collector lines to maintain a minimum 20-foot clearance. Vegetation within the remainder of the Project site would also be actively managed to control combustible materials, while still providing enough ground cover to prevent erosion and support compatible agricultural activities.
- Vegetation management practices would be consistent with applicable regulations, plans, and policies, including the Maui County Fire Code (MCC Chapter 16.04B), the South Maui Community Wildfire Protection Plan (HWMO 2024), the Maui County Multi-Hazard Mitigation Plan (MEMA 2025), and the State of Hawai'i's priorities and recommendations for enhancing wildfire readiness (FSRI 2025).
- The switchyard and interconnection lines, once transferred to Maui Electric, would be maintained in accordance with applicable PUC and other regulatory requirements as well as Hawaiian Electric system-wide standards, including their expanded Wildfire Safety Strategy (Hawaiian Electric 2025).

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<sup>25</sup> UL 9540 is a comprehensive safety standard developed by Underwriters Laboratories (UL) with strict safety, performance, and reliability requirements specifically for battery energy storage systems.

- The existing access roads and internal access routes used for the Project would provide the required clearance and turning radius needed for emergency response vehicles, in accordance with the fire code. In the event of an emergency, AES would support all forms of emergency or fire department access to the Project site.
- A Project-specific Emergency Response and Communication Plan (ERCP), detailing specific emergency response actions and procedures, would be prepared and implemented over the course of Project construction and operations (see Section 3.6.1).
- AES has been actively engaged and is working with Maui County Department of Fire and Public Safety regarding the adjacent Kūihelani Solar + Storage Project. As part of this engagement, the Kūihelani Solar + Storage Project team will be conducting annual meetings with the Department regarding project operations.

The Maui County Department of Fire and Public Safety will be consulted through the Project development process, with review of relevant permit applications and design drawings prior to construction, on-site training and orientation offered prior to commercial operation, and annual meetings offered throughout the operational phase.

## 3.4 Compatible Agriculture

HRS Chapter 205-4.5(a)(21)(A) requires that for solar energy facilities on LSB Class B or C land in the state agricultural district, “the area occupied by the solar energy facilities is also made available for compatible agricultural activities<sup>26</sup> at a lease rate that is at least fifty percent below the fair market rent for comparable properties.” The Project site comprises LSB Class B and E land, thus requiring compliance with this statute. As with its other solar facilities across the state, AES is committed to exceeding this statutory requirement for the Project with a robust and comprehensive compatible agricultural plan.

As part of the Project development process, AES engaged the services of former Hawai‘i Department of Agriculture (DOA) Chairperson Scott Enright (Enright Co.) to evaluate compatible agricultural opportunities for the Project based on site-specific considerations, current agricultural market conditions on Maui, as well as AES resources and experience. The results of this analysis, proposed compatible agricultural plan, and potential compatible agriculture partners for the Project are summarized below. The supporting analysis provided by Enright Co. is attached as Appendix E.

### 3.4.1 Evaluation of Compatible Agriculture Opportunities

#### 3.4.1.1 Feasible Compatible Agricultural Activities

Based on an evaluation of site conditions as well as the understanding that onsite water would not be available (see Appendix F), livestock production and beekeeping were determined to be the most viable

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<sup>26</sup> Within the context of HRS Chapter 205-4.5, agricultural activities are understood to include: (1) cultivation of crops, including crops for bioenergy, flowers, vegetables, foliage, fruits, forage, and timber; (2) game and fish propagation; and (3) raising of livestock, including poultry, bees, fish, or other animal or aquatic life that are propagated for economic or personal use.

agricultural uses within the Project site. These dual agricultural activities require considerably less water resources compared to other agricultural operations, such as crop cultivation. Furthermore, with the sensitivity in and around the Project site for wildfire and soil erosion, a successful livestock operation would provide natural vegetation management with less water demand while providing meaningful agricultural output for local consumption. As detailed below, these activities are both compatible with solar energy facilities and well-suited to the site conditions. Furthermore, AES has demonstrated the ability to successfully integrate these compatible agricultural activities at its other solar projects across Hawai'i (see Figure 9).

### **Livestock Production**

Livestock production, particularly sheep, has a proven track record of being successfully incorporated into solar production facilities in Hawai'i, across the United States, and even internationally. In addition to generating agricultural output (e.g., dairy, meat, and wool products), livestock production and rotational grazing provide multiple benefits for the land. For example, livestock production helps to support vegetation management, which in turn reduces combustible materials in fire-prone areas and has also proven to improve soil conditions. Specifically, research has found rotational grazing can improve soil health, increase biodiversity, and enhance carbon sequestration, while also lowering fire risks within solar projects (ASGA 2023, Towner 2021). Furthermore, raising livestock requires considerably less water resources compared to other agricultural operations, such as crop cultivation.

### **Beekeeping**

As pollinators, honeybees play a vital role in the reproduction of many flowering plants and crops, contributing to biodiversity and food security. Coinciding with a climate-adapted landscaping palate, the establishment of honeybee hives would provide pollination services within the Project site, but also more importantly to nearby natural habitats and adjacent agricultural operations. Honeybees also produce a variety of important agricultural products including honey, wax, propolis, and royal jelly.

Establishment of honeybee hives and pollinator habitat can be mutually beneficial with solar projects, as it utilizes the land under or around the solar panels, while also enhancing the environmental and social benefits of the project. For example, introduction of honeybee hives within solar projects may increase crop yields for nearby farms (Argonne National Laboratory 2018). At the same time, the shade created by solar panels can increase the abundance of flowers and delay the timing of their blooms, which is beneficial for pollinating insects (Graham et al. 2021).

#### **3.4.1.2 Resource Commitments**

As noted above, HRS Chapter 205-4.5(a)(21)(A) stipulates that solar projects must provide land "at a lease rate that is at least fifty percent below the fair market rent for comparable properties." AES has consistently exceeded this statutory requirement for previous projects in Hawai'i, including providing lease-free use of Project land, additional financial resources, and expert consultation services (e.g., legal services, agricultural consultation, and marketing support, etc.). Specific resources committed by AES for compatible agricultural activities within the Project site include the following:

- Project lands provided at no cost to local agricultural partners;

- Consultant resources for local agricultural partners (including but not limited to land use, agriculture, research, and legal services);
- Financial support to assist with compatible agricultural operational expenses (including but not limited to food, medicine, and supplies); and
- Infrastructure for compatible agriculture (such as water troughs and food stations, livestock shelters, fencing, beekeeping stations, storage shed, and other improvements).

#### 3.4.1.3 Agricultural Partners

As part of the evaluation of compatible agricultural opportunities for the Project, Enright Co. identified and facilitated early engagement with a local farming and ranching operator, Living Pono Project (LPP). LPP is a Maui-based non-profit agricultural organization that has operated in the Wailuku area for over ten years, with a proven track record of diversified agriculture, including compatible agricultural activities, as well as community-based philanthropic efforts. LPP is experienced with livestock production and currently manages multiple herds, including approximately 200 head at the adjacent Kūihelani Solar + Storage Project. With their affiliate partner Ho‘oulu ‘Āina Farms, their current farm operations feature a diverse array of products including a native Hawaiian plant nursery as well as sheep, chickens, pigs, kalo (taro), coconut, avocados, ‘ulu (breadfruit), and mai‘a (banana).

LPP also operates the Waikapū Food Hub, which distributes approximately 650 meal baskets per week to Maui families with products from LPP and other area farms; many of these food baskets are free of cost and given to families impacted by the Maui wildfires. LPP also provides job and skills training for at-risk youth, formerly incarcerated individuals, as well as Native Hawaiians and other community members seeking pathways to food and economic security.

A Letter of Interest (LOI) provided by LPP, expressing a desire to be engaged as an agricultural partner for the Kūihelani Solar Phase 2 Project, is contained in Appendix G.

#### 3.4.2 Proposed Compatible Agricultural Plan

Based on the guidance provided by Enright Co., AES is planning to partner with LPP to implement sheep production and beekeeping activities within the Project site. LPP would breed their existing stock, which include a mix of St. Croix and Dorper breeds, to support a herd of approximately 250 - 350 sheep within the Project site. Similar to their current operation at the AES Kūihelani Solar + Storage Project site, LPP’s operation at the Kūihelani Solar Phase 2 Project site would be expected to yield agricultural outputs including, meat, dairy, and possible specialty products for local consumption and regional markets. In addition to contributing to ongoing agricultural production, sheep grazing would also support land management within the Project site, including improved soil health, sustainable vegetation management, and fire prevention. To assist with the proposed sheep production and grazing operation, AES would work with LPP to site and install support facilities and equipment within the Project site. Approximately four holding pens/shelters as well as approximately nine water troughs (using onsite tanks filled using water trucks) would be installed throughout the Project site. The animals would be rotated between fenced areas of the Project site and, where appropriate, other areas of the Project with rotational

management based on rainfall levels and forage growth and volume. A conceptual layout of the compatible agricultural infrastructure is provided in the site development plan set (Sheet 7, Appendix D).

LPP also proposes to conduct beekeeping within the Project site under its established partnership with Nalo Meli Honey, a locally-based entity that produces honey and other related products for sale locally and online, including Japan and other Asian markets. In addition to agricultural products, the beehives would also provide important ecological services including pollination of crops for Mahi Pono as well as other surrounding farms in the Waikapū region. It is anticipated that the beekeeping operation would involve dispersed placement of beekeeping stations throughout the Project site. The stations would be mobile and generally consist of multiple hive enclosures (possibly stacked) constructed of wood material, situated on concrete blocks or other purpose-built pedestals, offering efficient access and collection of honey; they would also be sited at a reasonable distance from the Project facilities to minimize interference between the solar and beekeeping operations.

Preliminary estimates from the potential compatible agricultural operator suggest that up to 5,000 pounds of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established.

### 3.4.3 Future Opportunities and Considerations

In the event that the agricultural activities described above are determined to not be viable or the proposed agriculture partner ceases operations or an interest in partnering, AES would seek other potential partners for similar agricultural activities and would continue to fulfill the above-referenced commitments (or similar) in support of compatible agriculture within the Project site.

In addition, AES would continue to evaluate opportunities to further enhance the compatible agricultural portfolio for the Project site. To support this and other similar efforts, AES and other renewable energy Independent Power Producers (IPPs) in Hawai'i have partnered with the Hawai'i Agriculture Research Center (HARC) in association with the University of Hawai'i to establish the Agrivoltaic Research and Development Center. This research project seeks to explore opportunities to expand dual use of land to support both renewable energy production as well as agricultural output in Hawai'i. Co-location of local crops with solar arrays is still in its research phase and commercial-scale opportunities for such activities have not yet fully matured. However, initial research has already proven to be promising and it is a very real possibility that commercial-scale opportunities for crop cultivation within solar facilities will begin to materialize in the coming years. Any such future application for the Project would specifically include appropriate crops that do not require irrigation and can thrive in relatively arid conditions to ensure feasibility.

## 3.5 Construction Activities

Project-related construction activities are expected to include safety and compliance planning, site preparation, transport and delivery of Project equipment and materials, and equipment installation; each of these activities is generally described below. A detailed discussion of construction-related

impacts and measures that would be implemented to avoid and minimize those impacts is provided in Section 6.

As further detailed in Section 3.8, construction is expected to occur over an approximately 14- to 18-month period. Over the course of the construction period, the average number of workers expected to be at the Project site would range from approximately 80 to 100 workers per day. At the peak of construction, it is estimated that an average of approximately 200 workers would be onsite each day. Parking for construction workers would occur entirely within the Project site.

### 3.5.1 Construction Safety, Environmental Compliance, and Emergency Response

Prior to the start of construction, detailed plans addressing construction safety, environmental compliance, and emergency response would be prepared, as listed below. All workers would be trained on these topics, and the plans would be implemented throughout Project construction.

- **Health, Safety, and Security Plan:** Specific issues to be addressed in this plan include fire protection and response measures (including fire protection equipment), hazardous material control and spill prevention, safety and security procedures, emergency situations, and safety training and orientation.
- **Environmental Compliance Plan:** This plan would include details regarding environmental compliance requirements for the Project, including stormwater runoff management, soil erosion, and sediment control, as required by the Project's Storm Water Pollution Prevention Plan (SWPPP) and drainage and erosion control plans. The plan would also include information related to hazardous substance management, waste management, environmental emergency planning, noise mitigation, transportation and traffic mitigation, fugitive dust control, land and water resource protection, and threatened and endangered species protection.
- **Emergency Response Plan:** This document would include a risk assessment policy and site-specific emergency response plan, including (1) potential emergencies and response actions, (2) emergency notification system, (3) communication methods and processes, (4) evacuation routes and muster points, (5) external emergency contacts, (6) contingency plan for specific onsite activities, (7) emergency medical facilities including agreements, contacts, and transportation, and (8) onsite rescue equipment.

AES would employ a Safety Manager and Environmental Compliance Manager to oversee the contractor's environmental health and safety activities during construction. Weekly meetings and periodic site visits would be conducted over the course of the construction period to ensure that the Project is in compliance with these plans as well as all applicable local, state and federal regulations and associated permit requirements.

### 3.5.2 Site Preparation

Initial site preparation would involve grubbing and vegetation clearing as needed to accommodate construction of the Project facilities, along with adoption of best management practices (BMPs) as

described below. Clearing and grubbing would be phased, with natural vegetation preserved as much as possible, and soil would be temporarily stabilized as appropriate.<sup>27</sup> Internal access routes and staging areas would also be established. It is anticipated that the staging areas would rotate throughout the Project site as the Project is built out, with these areas installed incrementally as needed; in total, it is anticipated that staging would require approximately 15 acres (non-contiguous) within the Project site. Similarly, temporary work areas would be required for installation of the steel poles along the interconnection lines; the work areas would be up to 60 feet by 60 feet in size, located adjacent to each pole.<sup>28</sup> For each staging area and work area, some minor grading may be conducted to level the ground surface. In addition, installation of new internal access routes would involve grading, smoothing and placement of geotextile material and compacted gravel. Clearing, grubbing, and grading would be conducted using equipment such as bulldozers, excavators, compactors, graders, and front-end loaders. Water trucks would be used to provide moisture for compaction as well as dust control during construction as needed.

Project implementation would incorporate BMPs as required by relevant permitting and reviewing agencies to avoid and minimize potential impacts to the surrounding environment. In particular, BMPs would include various procedures, practices, treatments, structures and/or devices designed to eliminate and minimize the potential discharge of pollutants to downstream waters. The BMPs to be implemented would be determined in accordance with applicable regulatory requirements, including those associated with applicable grubbing and grading permits, the National Pollution Discharge Elimination System (NPDES) program and MCC Chapter 20.08 (Soil Erosion and Sedimentation Control), which require approval of a SWPPP and drainage and erosion control plans prior to construction (respectively). Specific BMPs would address erosion prevention, sediment control, and good housekeeping. No ground disturbing activities would occur until BMPs have been properly implemented and relevant permits/approvals have been secured.

In addition, a series of stormwater management features (e.g., drainage basins) would be installed to capture and treat stormwater in areas with increased impervious surfaces associated with the Project facilities. As discussed above, the majority of the Project site would require minimal grading such that the existing drainage patterns would not be altered. The stormwater retention features would be located within the limits of the Project site, particularly along the downgradient edge of new impervious surfaces (e.g., power conversion stations and battery energy storage foundations, and substation and switchyard areas). These features would be designed to retain and allow for infiltration or evapotranspiration of stormwater, as needed to reduce peak flows to pre-development levels. The size

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<sup>27</sup> The extent of vegetation clearing along the interconnection line would be consistent with Maui Electric's specifications, which include a 30-foot radius around each of the pole structures plus adjacent work areas, as well as 40 feet to either side of the electrical conductors, as needed to maintain adequate clearance between the surrounding vegetation and each electrical line.

<sup>28</sup> Transmission design and construction is based on specifications set forth by Maui Electric. Work areas may continue to be maintained by Maui Electric following commencement of operations and subsequent transfer of transmission infrastructure.

and design of the features would be based on site-specific conditions as well as the requirements of the County of Maui's Rules for the Design of Storm Water Treatment Best Management Practices and Rules for the Design of Storm Drainage Facilities (Maui County Department of Public Works [DPW] Administrative Rules Sections 15-111 and 15-04). Additional detail regarding the quantification of stormwater runoff and preliminary sizing/design of the infiltration features are provided in the Stormwater Management Design Memo contained in Appendix H.

### 3.5.3 Construction Transport and Delivery

The Project materials and equipment would be transported to Kahului Harbor via a freight shipping company and offloaded to standard transportation trucks. The trucks would deliver the equipment to the Project site via existing state and county roadways. It is anticipated that a total of approximately 1,400 tractor trailer loads would be required to transport Project materials and equipment; delivery of these loads would be spread over the 14 to 18-month construction period and would be timed to occur during off-peak traffic hours. Oversized trucks would be required for delivery of the two GSU transformers and the control enclosure to the Project substation; these would also occur during off-peak traffic hours and a permit for transport of oversized equipment and overweight loads on state and county roadways would be obtained, as needed.

No improvements or other construction would be required to accommodate equipment transport along state and county roadways. As further described in Section 7.4, a Traffic Impact Analysis Report (TIAR) concluded that neither construction nor operation of the Project would significantly increase traffic on the surrounding roadways. Regardless, a construction Traffic Management Plan (TMP) would be developed as needed, with implementation of appropriate measures to minimize traffic-related impacts.

### 3.5.4 Installation of Project Equipment

Following site preparation and equipment delivery, the general sequence for construction would involve installation of the following: (1) racking system, (2) electrical collector system, (3) solar photovoltaic modules and associated wiring, (4) concrete equipment pads and substation and switchyard foundations, (5) battery units, and (6) electrical equipment. Given the design tolerances of these facilities and the relatively low gradient of the Project site, a minimal amount of earthwork is expected to be needed for installation of the Project equipment. As further detailed below, grading for installation of the Project equipment is expected to be limited to the areas comprising the equipment pads for the power conversion stations and battery energy storage system, substation and switchyard foundations, as well as in localized areas within and adjacent to the solar arrays.

Overall, the extent of ground disturbance associated with the solar photovoltaic system is expected to be relatively minimal, as the racking system would be installed using structural posts and can tolerate much of the existing gradient within the Project site (based on the manufacturers' specifications). Grading would be limited to localized areas and would primarily be performed through 'track-walking' (i.e., use of heavy machinery such as bulldozers to smooth out minor undulations in the existing topography). The posts for the racking system would be installed using a hydraulic pile driver with approximate depths of

up to 11 feet (depending on soil conditions). The frames and other components of the racking system would be bolted to the posts, with the solar photovoltaic modules affixed to the frames.

Trenches would be excavated for both the DC electrical wiring, as well as some AC low-voltage wiring and communications wiring (running from the solar photovoltaic modules to the power conversion stations) and medium-voltage collector lines (running from the power conversion stations to the substation) using wheel- or track-mounted excavators (or similar). The trenches for the DC and low-voltage electrical wiring would be approximately 1-3 feet wide and 3 feet deep and the trenches for the medium-voltage collector lines would be approximately 2-6 feet wide and 4 feet deep; in some cases, the trenches could extend up to 20 feet in width to accommodate multiple circuits of wiring. Following placement of the electrical lines, excavated soil would be backfilled into the trench, tamped back to the appropriate level of compaction per the design specifications, and returned to existing grade. Although not anticipated, if the desired trench depth cannot be achieved (due to prohibitive subsurface conditions), the electrical wiring or collector lines would be covered with concrete slurry in accordance with the applicable electrical code requirements.

As described in Section 3.3.5, the Project would include two high-voltage loop lines to facilitate interconnection with Maui Electric's grid. In addition, a few short overhead medium-voltage electrical spans would be needed to facilitate connections within the Project site where underground trenching is restricted by existing utilities or onsite gulches. Installation of the high-voltage structures would generally be performed using auguring equipment to create 3 to 6-foot diameter circular excavations to depths up to approximately 21 feet (for concrete/drilled pier foundations or direct embedment/concrete encased), followed by placement of grounding wire dead-ends, anti-corrosion anode bags, pole erection and installation of tensioned guywires where necessary. Boom trucks, man-lifts, and other specialized equipment would be utilized to string the conductor cabling and shield wiring from structure to structure. Installation of medium-voltage lines would require similar, but reduced, means. These lines would be installed on wood monopole structures, either directly embedded or concrete-encased, with excavation to depths up to 15 feet, as well as installation of grounding wires and tensioned guywires. Cable stringing may be performed via slack stringing, where lines are manually pulled along the ground and threaded through temporary equipment on structures. Where required, stringing may include use of man-lifts, boom-cranes, or equipment assisted tensioning.

The equipment pads and substation and switchyard foundations would involve excavation, up to approximately 5 feet in depth, installation and compaction of subgrade engineered fill, placement of metal grounding grids, and installation of concrete or pile foundations. Certain substation, switchyard, and power conversion station equipment would be supported by concrete pier foundations, which would be installed to an approximate depth of 10-20 feet. Excavated soil would either be used elsewhere within the Project site or hauled to an approved offsite facility. Subgrade engineered fill would be delivered and compacted in place. Concrete for the pads and foundations would be delivered in ready-mix concrete trucks; the Project would not include a concrete batch plant. Once the equipment pads and substation and switchyard foundations have been installed, the battery units and various

electrical equipment would be installed. All electrical equipment and wiring would be installed and inspected in accordance with applicable code requirements and best industry practices.

Once installed, the Project components are expected to have a footprint (i.e., new impervious surfaces) comprising no more than approximately 12.8 acres, as summarized in Table 1. As shown in the site development plan set (Sheet 5, Appendix D), these components would be contained within an approximately 250-acre fenced area;<sup>29</sup> use of the remainder of the 476.303-acre Project site would generally be limited to compatible agricultural activities. It is important to note that these dimensions are estimates based on the current level of design. As described in Section 3.3, the exact equipment dimensions and/or quantities will be refined through the final design process based on technological advancements and equipment procurement. Any refinements are expected to be relatively minor, with the resulting dimensions similar to (or less than) those listed in Table 1.

### 3.5.5 Post-Construction Site Stabilization

Following construction, areas that have been temporarily disturbed may be revegetated for soil stabilization and erosion control purposes; however, minimal revegetation is expected to be required as site preparation methods would limit impact to underlying root structures, thus encouraging regrowth of existing vegetation. Revegetation, if needed, is expected to involve application of hydroseeding with a suitable mix of native and/or non-invasive grass species. Any species used for revegetation would also be considered in terms of compatibility with onsite agricultural activities (e.g., forage for livestock and honeybees).

In addition to revegetation of temporarily disturbed areas, permanent BMPs would be implemented to address long-term stormwater requirements. To the extent practicable, the BMPs would incorporate low impact development (LID) design strategies and source control measures, in accordance with the requirements of the County of Maui's Rules for the Design of Storm Water Treatment Best Management Practices. The specific strategies and measures would be identified as part of a Stormwater Quality Best Management Practices and Maintenance Plan and/or relevant grubbing and grading permits, which would be submitted for approval prior to construction. As described in Section 3.5.2, BMPs would include drainage basins for detention and infiltration of stormwater.

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<sup>29</sup> Maui Electric's switchyard and interconnection lines, as well as some civil improvements (e.g., internal access routes and stormwater retention features) would be located outside the perimeter fence.

**Table 1. Approximate Extent of Project Components**

<b>Project Component<sup>11</sup></b>	<b>Quantity / Dimensions (approximate)</b>	<b>Total Area<sup>2/</sup> (approximate)</b>	<b>Footprint<sup>2/</sup> (approximate)</b>
Solar Photovoltaic Modules <sup>1</sup>	Approximately 107,000 modules with approximately 19,500 structural piles	68.8 acres	0.1 acres
Power Conversion Stations and Battery Energy Storage System	24 stations with two equipment pads (each station totaling approximately 1,700 square feet)	0.9 acres	0.9 acres
Substation	Approximately 140 feet by 210 feet (fenced)	0.7 acres	0.7 acres
Switchyard <sup>3/</sup>	Approximately 210 feet by 245 feet (fenced)	1.2 acres	1.2 acres
Interconnection Lines	24 steel structures (6-foot diameter foundations); 20 work pads (approximately 3600 square feet each)	1.7 acres	0.01 acres
Storage Containers	Concrete pad (approximately 30 feet by 50 feet);	0.03 acres	0.03 acres
Trenching for Low-Voltage Electrical Wiring	25,000 linear feet (1-3 feet wide, with some sections up to 10 feet wide)	4.9 acres	0
Trenching for Medium-Voltage Collector Lines	30,000 linear feet (2-6 feet wide, with some sections up to 20 feet wide)	8.3 acres	0
Internal Access Routes <sup>4/</sup>	2.8 linear miles (16 feet wide plus shoulders) as well as associated turn around areas	9.7 acres	9.7 acres
Staging and Laydown Areas	Installed incrementally as Project is built; up to 15 acres (non-contiguous)	15.0 acres	0
Agricultural Facilities	4 holding pens with pre-fabricated shelters (750 square feet each) <sup>5/</sup>	0.1 acres	0.1 acres
<b>TOTAL</b>		<b>111.2 acres</b>	<b>12.8 acres</b>
<p>NOTES:</p> <p>1/ The Project would also include features to provide stormwater retention and infiltration; however, these features would not constitute new impervious surface. The final design for these features, including the specific size and extent, would be finalized as part of the grading plans.</p> <p>2/ Total area refers to the maximum areal extent of each component (including construction work areas), and footprint refers to the amount of ground surface that would be displaced by each component (i.e., new impervious surfaces) once installed. For the solar photovoltaic modules, the calculation of total area is based on the surface area of the panels (in stow position); the calculation of footprint is based on the dimensions of the post foundations.</p> <p>3/ The exact requirements for the switchyard and interconnection equipment are still being determined by Maui Electric; design and engineering is under review by Maui Electric.</p> <p>4/ The calculation of internal access routes does not include existing access roads; internal access routes are assumed to have a width of approximately 16 feet plus 4-foot shoulders on either side.</p> <p>5/ The calculation assumes that the only permanent footprint associated with the agricultural facilities would be the pre-fabricated shelters; the beekeeping stations and water troughs would be mobile features with no permanent footprint.</p>			

## 3.6 Operations and Maintenance Activities

Following construction, the solar photovoltaic and battery energy storage system would generally involve passive operations.<sup>30</sup> The facility would be continuously monitored for safety, and local crews would manage the site and vegetation in ways that reduce fire risk while also supporting compatible agricultural activities (such as grazing). As further detailed in Section 6, the facility would not generate substantial noise, traffic, or other community impacts.

Routine monitoring and management of facility operations would be conducted by dedicated on-island field personnel employed by AES. In conjunction, the Project would also be monitored by a designated ROCC, which would track notifications from multiple sources (e.g., onsite alarm systems, internal/external phone calls, and third-party monitoring services). Metering equipment would send system performance and production data to continuously-monitored servers; electronic notification would be sent to the operations and maintenance team if these data indicate the system is underperforming. If necessary, a technician would be dispatched to the Project to address any issues. Periodic maintenance and inspection of the facilities would occur intermittently over the course of Project operations and would include testing and replacement of component parts on the inverters, transformers, and substation equipment. Decommissioned parts would be salvaged or recycled to the extent feasible or properly disposed of in accordance with applicable regulations, consistent with the approach described in Section 3.7.

Vegetation within the Project site would be actively managed throughout the life of the Project as needed to facilitate operational reliability and fuel reduction for fire mitigation purposes. Specifically, a 30-foot (minimum) non-vegetated fire break would be installed around the perimeter of the Project site as well as the various electrical equipment (e.g., a 20-foot buffer within the fence line and 10-foot buffer outside the fence line). Vegetation management would also occur along the overhead electrical collector line corridors to maintain a minimum 20-foot clearance.<sup>31</sup> Vegetation within the remainder of the Project site would be managed to control combustible materials, while still providing enough ground cover to prevent erosion and support compatible agricultural activities. In addition to livestock grazing, vegetation management could include mowing, weed whacking, and localized application of herbicide, if needed.

It is estimated that an average of 3-4 workers would visit the site per day to support these ongoing operations within the Project site; an additional 1-2 people would visit the site on a regular basis to support compatible agricultural operations. Mobile trailer(s) located on a graveled pad adjacent to the substation and switchyard would be used to provide onsite space for operations and maintenance staff, as

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<sup>30</sup> Following construction, ownership of the switchyard and interconnection facilities would be transferred to Maui Electric along with responsibility for all associated operations and maintenance activities; these facilities would be maintained in accordance with applicable PUC and other regulatory requirements as well as Hawaiian Electric system-wide standards, including their expanded Wildfire Safety Strategy (Hawaiian Electric 2025).

<sup>31</sup> Vegetation management along the interconnection lines would be conducted by Maui Electric, in accordance with applicable PUC and other regulatory requirements as well as Hawaiian Electric system-wide standards, including their expanded Wildfire Safety Strategy (Hawaiian Electric 2025).

well as telecommunications, security, and monitoring equipment. The trailer(s) would utilize electricity provided through the station service line; no sanitary wastewater or domestic water would be required.

### 3.6.1 Emergency Response Planning

An Emergency Response and Communication Plan (ERCP) would be prepared and implemented to address unpreventable emergency situations that may arise over the course of the Project's operational phase. The ERCP would contain guidance for determining the appropriate actions to prevent injury and property loss from the occurrence of emergency incidents in compliance with applicable federal, state, and local regulations related to emergency action planning. The ERCP would include a risk assessment matrix, roles and responsibilities, communication protocols, and training requirements for emergency response; an example ERCP from a similar solar and battery storage project operated by AES is contained in Appendix I. The Project would also submit annual Hawai'i Emergency Planning and Community-Right-To-Know Act Tier II chemical inventory reports to the State of Hawai'i Department of Health (DOH). The inventory would include the location and volume of all onsite hazardous substances, as well as the batteries. The information received would be used by the DOH Hazard Evaluation and Emergency Response (HEER) Office, the Local Emergency Planning Committee (LEPC), and local emergency agencies such as the fire department for emergency planning and response to accidents or releases of hazardous chemicals or substances.

## 3.7 Decommissioning

The Project would operate for the duration of the PPA and may be re-powered under a new PPA (with subsequent permits/approvals) or decommissioned. In accordance with the requirements of HRS Chapter 205-4.5(a)(21) as well as the terms of the land agreement with Mahi Pono, decommissioning would involve removal of all equipment associated with the Project and returning the Project site to substantially the same condition as existed prior to Project development. As further required by HRS Chapter 205-4.5(a)(21), proof of financial security for the cost of decommissioning would be provided to the Maui Planning Commission prior to the commencement of commercial generation. The financial security would be in the form of a parent guaranty, bond, or letter of credit, with the security to remain in place for the duration of the Project. The activities that would be expected to occur as part of decommissioning are summarized below and described in further detail in the Decommissioning Plan (Appendix J).<sup>32</sup>

Prior to expiration of the PPA and end of operations, AES would notify the Maui County Planning Commission in writing of the proposed date of discontinued operations of the Project and, once available, provide plans for initiation of the facility decommissioning and site restoration work.

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<sup>32</sup> Decommissioning activities would be conducted in accordance with all relevant ordinances and regulatory requirements that are in place at the time of decommissioning. Because decommissioning would not be expected to occur for many years, and given that regulatory requirements could change, the applicable permitting and regulatory requirements would be reviewed with the appropriate local and state agencies to ensure compliance prior to decommissioning activities.

Decommissioning would commence once the Project has been fully de-energized and isolated from all external electrical connections, in coordination with Maui Electric.<sup>33</sup> Consistent with the measures described for construction and operation of the Project, BMPs would be implemented and maintained throughout the decommissioning phase as needed to avoid and minimize potential impacts to the surrounding environment, particularly those related to dust, erosion and stormwater. Once the site has been adequately prepared for decommissioning, the following equipment would be removed: (1) solar photovoltaic modules and racking system, including steel posts, (2) power conversion stations and battery energy storage systems, including battery units and battery modules, inverters and transformers, and other auxiliary equipment, (3) substation and related components including communication, operations, and security equipment, (4) electrical wiring and connections, and (5) fencing and gates.<sup>34</sup> Other Project components, such as the onsite storage containers and mobile operations trailer(s) would also be removed from the Project site. All foundations would be removed to at least 24 inches below grade, and piles would be fully extracted.

Decommissioning would be conducted in accordance with industry standards, with all equipment and materials treated according to the highest and best use. Equipment and materials would be refurbished, salvaged, or recycled to the extent feasible in accordance with relevant regulations, and in partnership with sub-contractors, local waste haulers and/or other facilities that recycle construction/demolition waste or refurbish equipment or, where feasible, repurposed locally for community benefit. If necessary and as required, components that cannot be reused, salvaged, recycled, or repurposed would be disposed of off-island at a solid waste facility or landfill in accordance with relevant regulations. All waste requiring special disposal (e.g., transformers) would be handled according to regulations that are in effect at the time of disposal. Following removal of Project equipment, site restoration would be conducted such that the physical conditions of the Project site are returned to substantially the same condition as existed prior to Project development; these activities would include (1) removal of gravel and other aggregate material, (2) localized grading and disking to match surrounding elevations and/or aerate soil, (3) replacement of topsoil where disturbed, and (4) revegetation of disturbed areas, where necessary, with an appropriate seed mix. AES would consult with the landowner to determine if they wish to leave access routes or fencing in place to support their operations. Decommissioning would occur within 12 months of the conclusion of Project operations. Decommissioning plans would be communicated with the landowner, the public and the regulatory agencies, prior to and during the decommissioning phase, as appropriate.

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<sup>33</sup> As ownership of the switchyard and interconnection lines would be transferred to Maui Electric following construction of the Project, decommissioning of these facilities would be subject to Maui Electric's standards and requirements, and is expected to follow a similar approach as the treatment of the Project's substation, electrical wiring and connections, and other similar components.

<sup>34</sup> The extent to which the internal access routes and fencing within the Project site would be removed would be coordinated with the landowner at the time of decommissioning.

### 3.8 Development Schedule

The estimated durations to achieve key milestones associated with the Project are listed in Table 2. Upon approval of discretionary permits and entitlements (i.e., CSUP and SSP), the Project would seek necessary state and county ministerial permits (e.g., NPDES, grading, building, electrical, etc.). Once permit approvals have been obtained, construction would commence, followed by facility commissioning activities. Thereafter, energization and final system testing would be required before commercial operations can begin in accordance with the PPA. The Project is currently targeting a Commercial Operations Date at the end of 2028 to ensure attainment of expiring federal tax credits that are intended to keep costs lower for the benefit of Maui ratepayers. However, the Project schedule may be subject to delay.

**Table 2. Duration of Anticipated Project Milestones<sup>1/</sup>**

Milestone	Anticipated Duration
Preliminary design and early community consultation	18-24 months
Discretionary entitlements and approval process (County and State special use permits)	6-12 months
Final engineering and design	6-18 months
Ministerial permit approval process (NPDES, Plan Review, Grading, Building, Electrical, etc.)	6-18 months
Mobilization, component deliveries, and construction	16-24 months
Commissioning, energization, and final system testing	8-12 months
Target Commercial Operation Date	EOY 2028
Commercial Operation Period	20 + years
Decommissioning	12 months
NOTES: 1/ Certain durations may run concurrently.	

AES understands and recognizes that the County of Maui Planning Department and LUC grant special use permits for a specified duration. To ensure Project viability, a permit term of 30 years would be required. This permit duration is necessary to cover the operational period of the PPA with Maui Electric, which is expected to be a minimum of 20 years subject to PUC approval, and the pre-development and decommissioning of the Project. Thereafter, an additional PPA may be exercised by Maui Electric with approval by the PUC to further extend the operational life of the Project for any remaining time within the permit term.

The 30-year permit term would allow sufficient time following CSUP/SSP approval for the multi-year predevelopment process, which includes ministerial permit approvals as well as construction, commissioning, and system testing. As previously referenced, it is also necessary for the permit term to accommodate schedule uncertainty and risk of unanticipated delays which utility-scale renewable

energy projects throughout the state have often encountered. Examples of delays that have impacted similar past and current utility-scale renewable energy projects in Hawai'i include:

- Construction stoppages and supply constraints due to Covid-19;
- Supply chain disruptions due to changes in federal policies for international importation of project components;
- Delays and diversion of governmental, utility, and developer resources in response to Maui wildfires;
- Regulatory and policy changes including Act 191, Session Law 2025 (requiring the Department of Budget and Finance to enter into step-in agreements for payment obligations arising under certain power purchase agreements); and
- Federal tax credit policy changes for renewable energy arising from federal administration changes.

The Project would begin the 12-month decommissioning process, as described in Section 3.7, with the site restored to pre-existing conditions immediately upon ceasing operations at the end of the PPA term (as early as the end of 2048 and no later than 29 years after the CSUP/SSP approvals are granted).

The 30-year permit would allow AES to fully commit to this Project's long-term success and provide flexibility to the PUC and Maui Electric to realize Project benefits for the island's rate payers, while also giving the County, State, and community confidence that the facility will be built, operated, and ultimately decommissioned in a safe and well-planned way. The permit term required for the Project is also consistent with special use permits granted for similar utility-scale projects such as Ho'ohana Solar 1 (Oahu, 43 years), Kuihelani Solar + Storage (Maui, 38 years), and Mahi Solar (Oahu, 39 years), among others.

# 4 Land Use History and Classifications

*This section addresses the information requirements related to the land use history, designations, violations, and uses as specified in Sections VA(1) and IID of MAPPS for a CSUP/SSP.*

## 4.1 Land Use History

The Project site is located in the Waikapū Ahupua‘a in the moku of Wailuku. Waikapū is one of the four ahupua‘a traditionally comprising the ‘okana (sub-district) of Maui known as “Nā Wai ‘Ehā,” or “The Four Waters,” so named for the four major deep-valley streams that flow from Mauna Kahālāwai (West Maui Mountains) (Handy et al. 1991; Moffat and Fitzpatrick 1995). Geographically and culturally, the four streams of Nā Wai ‘Ehā — Waikapū, Wailuku, Waiehu, and Waihe‘e — were an important source of water for the area stretching across Maui’s central isthmus. Waikapū included agriculturally abundant lands with extensive lo‘i, or wetland taro cultivation (Handy et al. 1991).

Foreign commercialism, including sugar processing and coffee production, was initially introduced to Waikapū in the 1820s and altered the traditional lifeways throughout the region (Wyllie 1854; Thrum 1874; Kuykendall 1938). With the rise in commercial agriculture, remnants of indigenous agriculture either fell into disrepair or were absorbed by the developing plantations. Although vestiges of lo‘i cultivation remained through the 1930s, most of the lo‘i terraces in Waikapū were eventually plowed under by the expansion of commercial sugarcane cultivation (though a few were preserved in plantation camps and under house sites, or reused as garden sites [Handy et al. 1991]).

During the Māhele, which involved the division of Hawaiian lands and introduced private property into Hawaiian society, the lands surrounding Waikapū Commons were sold by the Department of Education, with Royal Patents issued in 1854. These Royal Patents were subsequently surrendered and cancelled, and the land was quit-claimed back to the Board of Education in August 1860. In 1875, the Board of Education sold at auction the “land known as the ahupuaa of Waikapū, saving grants hitherto made within said ahupuaa, or sales by the board of education” to Henry Cornwell (The Pacific Commercial Advertiser 1879); Cornwell acquired these lands in fee-simple under Royal Patent No. 3152. The Project site is situated entirely within this land grant.

The lands purchased by Cornwell were added to the holdings of the Waikapū Sugar Plantation, originally started by Henry Cornwell and James Louzada on Land Grant 2951. Subsequently, Claus Spreckels bought an undivided interest in 12,000 acres of Waikapū Commons from Cornwell and leased an additional 24,000 acres of adjacent Wailuku Commons from the government (Wilcox 1996); these lands would form a large portion of the HC&S plantation. By 1888, HC&S had grown to be the largest sugar plantation in the world; however, financial pressures forced Spreckels to eventually give up control to Samuel T. Alexander and Henry P. Baldwin (Dean 1950). Alexander & Baldwin (A&B) continued cultivation of sugarcane on these lands until ceasing HC&S operations in 2016.

In December 2018, A&B sold approximately 41,000 acres of vacant agricultural lands formerly used for sugarcane production to Mahi Pono. In addition to partnering with AES for production of renewable energy, Mahi Pono is implementing a diversified agricultural plan which involves extensive crop cultivation and livestock across 41,000 acres in Central Maui (Mahi Pono 2025).

## 4.2 Land Use Classifications

### 4.2.1 State Land Use Designations

The Hawai'i State Land Use Law (HRS Chapter 205) established the LUC and granted the authority to classify all lands in the state into one of four land use districts: urban, rural, agricultural, and conservation. Based on the land use district boundaries established by the LUC, the Project site was initially designated and remains entirely within the state agricultural land use district (Figure 10). Compliance with HRS Chapter 205 is further discussed in Section 10.1.2.

### 4.2.2 County Land Use Designations

#### 4.2.2.1 Maui Island Plan Growth Boundaries

The Maui Island Plan specifically identifies alternative energy systems as a suitable use outside of urban, small town, and rural growth boundaries when consistent with community plans and zoning (County of Maui 2012). According to the plan, the Project site is located outside the directed growth boundaries; consistency with the specific objectives and policies of the Maui Island Plan, community plan, and zoning ordinance is further addressed in Section 10.2.

#### 4.2.2.2 Community Plan Land Use Designations

The Project site is located in the northwest portion of the Kīhei-Mākena Community Plan area. Based on the Kīhei-Mākena Community Plan Land Use Map, this area is identified as Agriculture and Project District 11 (Mā'alaea Village),<sup>35</sup> with a small inclusion of Open Space along the southern boundary (see Figure 11; County of Maui 1998).

An update to the Kīhei-Mākena Community Plan (renamed as the South Maui Community Plan) is currently in progress. Based on the May 2025 version of the Draft South Maui Community Plan, the Project site is within North Kīhei Subarea 2 and is designated for Agriculture with Open Space along Pale'a'ahu Gulch and Pōhākea Gulch (Figure 12; County of Maui 2025a).

Consistency with the existing Kīhei-Mākena Community Plan and Draft South Maui Community Plan is further discussed in Sections 10.2.1.3 and 10.2.1.4, respectively.

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<sup>35</sup> Project District 11 (Mā'alaea Village) is identified in the Kīhei-Mākena Community Plan as a 650-acre area designated for a master planned residential community, with single and multi-family housing types and community amenities including a golf course, community center, village center with commercial services, community park, pedestrian/bicycle paths, and buffer zones (County of Maui 1998). The community plan specifies that each project district will be implemented through a separate ordinance; however, to date, no ordinance has been passed with respect to Project District 11.

#### 4.2.2.3 Zoning Designation

The Project is located entirely in the county agricultural zoning district, as shown on Figure 13. Based on available information, no portion of the Project site is known to have been previously rezoned. Compliance with the county's zoning ordinance is further discussed in Section 10.2.2.

#### 4.2.2.4 Other County Designations

No portion of the Project site is within the Special Management Area (SMA), which is regulated by Maui County under the Hawai'i Coastal Zone Management (CZM) program, or county historic district (pursuant to MCC Chapter 19.50). As further discussed in Section 10.2.2.4, portions of the Project site that encompass Pale'a'ahu Gulch and Pōhākea Gulch were identified on an inventory map prepared by Maui County for the Wetlands Overlay District, pursuant to MCC Chapter 19.47; however, zoning requirements for the Wetlands Overlay District have yet to be established by the county council.

### 4.3 Land Use Violations

Based on available records and information, no land use or zoning violations are known to have been previously issued for the Project site.

# 5 Site Conditions

*This section addresses the information requirements related to the site conditions as specified in Sections IC and ID of MAPPS for a CSUP/SSP.*

## 5.1 Elevation, Slope, and Topography

The Project site is located entirely within Maui’s central isthmus, between the eastern slopes of Mauna Kahālāwai (West Maui Mountains) and the western slopes of Haleakalā. The elevation of the site ranges from approximately 30 feet above mean sea level (amsl) along the southern edge to approximately 150 feet amsl along the northwestern edge (see Figure 14). On average, the Project site has a slope of less than 5 percent.

The topography is generally flat with some variation where Pale’a’ahu Gulch and Pōhākea Gulch intersect the Project site. These features, which are generally oriented from northwest to southeast, extend beyond the Project site toward Keālia Pond.

## 5.2 Soil Types

The soils throughout the Project site have been highly modified by past land uses, including routine plowing and intermixing of imported materials for cultivation purposes. Based on archaeological investigations within and surrounding the Project site, the depth of the plow zone associated with previous agricultural activities is up to approximately 4 feet below the ground surface (Yucha and Hammatt 2019; Yucha et al. 2024).

### 5.2.1 Natural Resource Conservation Service Soil Survey

According to data published by the Natural Resources Conservation Service (NRCS), the soils within the Project site are primarily Jaucas Sand (0 to 15 percent slopes), which consist of excessively drained soils developed in wind- and water-deposited sand, with assorted Pūlehu series soil types (silt loam, cobbly silt loam, clay loam, and cobbly clay loam) covering the remaining area (Figure 15; NRCS 2024).

### 5.2.2 Land Study Bureau Soil Classification

This statewide inventory provides an agricultural productivity rating based on site characteristics, range from Class A to Class E (with Class A representing the most productive soils and Class E representing the least productive soils). As shown in Figure 16, the soils within the Project site are characterized as LSB Class B (365.493 acres; 77 percent of the Project site) and LSB Class E (110.810 acres; 23 percent of the Project site). The Project would not involve construction of any facilities on LSB Class A soils.

## 5.3 Natural Features

The Project would not affect any streams; as previously described and further discussed in Section 6.3.1.1, the Project was proactively sited to avoid Waikapū Stream. The Project site was formerly part of

the HC&S sugarcane plantation which was continuously cultivated for a period of more than 100 years until commercial operations ceased in 2016. The site now comprises fallow agricultural fields; the only natural features within the Project site are two ephemeral gulches (Pōhākea Gulch and Pale‘a‘ahu Gulch) which extend south toward Keālia Pond (Figure 17).

## 5.4 Vegetation

The vegetation within the Project site has been modified by historic agricultural uses, the introduction of invasive species, and a recent wildfire in 2018, which collectively have reduced the number and abundance of native species and habitats suitable for native species. No federal or state listed threatened, endangered, proposed listed, or candidate plant species are known to occur within the Project site.

The vegetation within the Project site is characterized by fallow agricultural fields, formerly cultivated in sugar cane (*Saccharum officinarum*), that are now predominately covered by Buffelgrass (*Cenchrus ciliaris*) Grassland. The vegetation in the southwestern portion of the Project site and along Pale‘a‘ahu Gulch consists of Kiawe (*Neltuma pallida*)/Koa Haole (*Leucaena leucocephala* subsp. *leucocephala*) Forest, with moderately dense to open cover of these species. Additional information regarding the vegetation within the Project site is provided in Section 6.3.3.1.

## 5.5 Existing Development

As previously described, this area was formerly part of the HC&S plantation and was used for sugarcane cultivation for more than 100 years, until commercial operations ceased in 2016. Since closure of the plantation, the land within the Project site has been fallow and has not been cultivated or otherwise used for agricultural purposes. Presently, the Project site consists of fallow fields and plantation roads, as well as irrigation equipment and other remnant features of the former plantation. The only other structures present within the Project site are two overhead 69kV electrical transmission lines, which are owned and operated by Maui Electric; these transmission lines span the southern and western portions of the Project site and include a series of wooden utility poles, generally ranging in height up to approximately 60 feet.

## 5.6 Surrounding Land Uses

Surrounding land uses to the north include AES’ existing Kūihelani Solar + Storage Project, which has been operational since May 2024, and Kūihelani Highway. Beyond Kūihelani Highway are various fields and farmlands associated with the agricultural preserve for the proposed Waikapū Country Town development, as well as County of Maui baseyard facilities (Figure 18).

The area to the east of the Project site is agricultural land which has been planted with citrus trees as part of Mahi Pono’s diversified agricultural operations (Mahi Pono 2025), beyond which is Maui Veterans Highway as well as Army National Guard facilities and Maui Raceway Park. Possible future developments in this area have been identified as part of the Pūlehunui Regional Infrastructure Master

Plan, which includes industrial, commercial, and agricultural homestead developments on Department of Hawaiian Homelands (DHHL) land, an industrial and business park on Department of Land and Natural Resource (DLNR) land, as well as a public safety complex on Department of Accounting and General Services (DAGS) land (DHHL 2024).

Surrounding land uses to the south include fallow agricultural fields and Maui Electric's Mā'alaea Power Plant. Further south beyond the power plant, approximately 0.3 miles from the southern boundary of the Project site, is the Keālia Pond National Wildlife Refuge.

The area to the west of the Project site includes fallow agricultural fields and North Kīhei Road, beyond which are a variety of commercial developments. The nearest residents are nearly a mile from the Project site, in Mā'alaea (Figure 19).

# 6 Potential Impacts and Mitigation Measures

## 6.1 Archaeological, Historical, and Cultural Resources

*This section addresses the information requirements related to potential archaeological, historical, cultural impacts and traditional access trails as specified in Sections IIE and VA(3) of MAPPs for a CSUP/SSP.*

### 6.1.1 Archaeological and Historic Resources

An archaeological inventory survey (AIS) was conducted by Cultural Surveys Hawai'i to identify, document and assess the significance of archaeological and historic properties within the Project study area.<sup>36</sup> The AIS included background research (with sources including archival documents, historic maps, Land Commission Awards [LCAs], and previous archaeological reports) to construct a history of land use and to determine if historic properties have been previously recorded in or near the Project study area, as well as to formulate a predictive model of the types and locations of historic properties that would be expected to occur. To identify potential historic properties within the Project study area, a variety of field investigations were conducted, including extensive subsurface testing. The results of these efforts were documented in a Draft AIS Report, which was submitted for review by the State of Hawai'i Historic Preservation Division (SHPD) pursuant to HRS Chapter 6E and Hawai'i Administrative Rules (HAR) Section 13-284 on August 30, 2024. The findings of the AIS are summarized below; a copy of the Draft AIS Report is provided in Appendix K.

#### 6.1.1.1 Traditional and Historical Background

As previously described, the Project study area is within the Waikapū Ahupua'a and is part of Nā Wai 'Ehā, the region containing the four streams that flow from Mauna Kahālāwai (Handy et al. 1991; Moffat and Fitzpatrick 1995). In ancient times, Waikapū included agriculturally abundant lands that were known for their extensive lo'i, or wetland taro cultivation (Handy et al., 1991).

Portions of Waikapū Ahupua'a also comprise Ke Kula o Kama'oma'o, or the Plains of Kama'oma'o, which is a region of sandy plains known by Hawaiians in traditional times as a wandering place of the souls (Emerson 1993; Beckwith 1970), a place where dead spirits waited for a friendly escort, such as a family 'aumakua, to show them the way to eternity. Ke Kula o Kama'oma'o is also described as a special place for the souls of the soldiers killed at Kakanilua, or the Battle of Wailuku Common (Holt-Padilla in Hill et al. 2006). This region is also an area where Ka Huaka'i o ka Po, or the "Marchers of the Night," are sometimes heard and seen (Hoyt 1976).

There are accounts of several large pre-Contact and early post-Contact battles, such as the Battle of Wailuku Common, that took place in this region. An 1841 account of Commodore Charles Wilkes of the American Navy published in the January 7, 1927 edition of the Honolulu Advertiser describes a "mound

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<sup>36</sup> As described in Section 3.2, due diligence studies for the Project were conducted within an approximately 730-acre study area to provide flexibility for a responsible siting process.

of human bones” thought to be the bodies of fallen warriors in the Sand Hills of Wailuku. There is also archaeological evidence of human burial clusters and isolated burials throughout this region that more closely resemble the careful interment of the traditional Hawaiian local inhabitants of the land (Kennedy 1991; Kennedy 1994; Pestana and Dega 2008; Rotunno-Hazuka and Pantaleo 2004). Together, this information speaks to the cultural sensitivity of this region.

There are no LCAs within the Project study area. As previously described, the lands surrounding Waikapū Commons (including the Project site) were acquired by Henry Cornwell and added to the Waikapū Sugar Plantation in 1875. Over time, this area was incorporated into the HC&S plantation and remained in sugarcane cultivation until commercial operations ceased in 2016.

#### 6.1.1.2 Field Investigation

In addition to background research, field investigations conducted in support of the AIS include the following efforts:

- **Reconnaissance-Level Survey:** In March 2023, Cultural Surveys Hawai‘i completed an archaeological literature review and field inspection including a reconnaissance-level pedestrian inspection (Yucha et al. 2023) throughout the Project study area.
- **Pedestrian Survey:** In January 2024, Cultural Surveys Hawai‘i completed a 100-percent coverage pedestrian survey with transects spaced every 10-15 meters throughout the Project study area depending upon ground visibility.
- **Observation of Geotechnical Boring Operations:** In February 2024, Cultural Surveys Hawai‘i observed geotechnical boring and test excavation operations conducted by Fewell Geotechnical Engineering, Ltd (FGE) at 56 locations across the Project study area.
- **Subsurface Testing and Ground Penetrating Radar (GPR):** Based on an archaeological inventory survey fieldwork strategy reviewed and agreed upon by SHPD on January 11, 2024, Cultural Surveys Hawai‘i conducted subsurface testing and GPR surveying between January 22 and April 29, 2024. This effort included a total of 230 backhoe-assisted test excavations and 12 GPR transects across the Project study area.

#### 6.1.1.3 Historic Properties

Based on the AIS fieldwork, no pre-Contact historic properties or deposits were identified within the Project study area; a total of four potentially significant Post-Contact historic properties were identified. The AIS pedestrian inspection identified a linear cement and concrete remnant ditch related to historic through modern commercial agricultural operations (SIHP # 50-50-04-09164) and an artifact scatter representing the remnants of HC&S Camp Seven (SIHP # 50-50-04-09165). Through subsurface testing, two additional features of a previously documented historic property, SIHP # 50-50-04-08805 Features C and D (associated with soil enrichment activities), and a buried concrete remnant that appears to have been a foundation for a ditch or flume associated with historic commercial agriculture (SIHP # 50-50-04-09166) were also identified. The findings of the AIS are consistent with evidence of long-term use of the Project study area for commercial sugarcane agriculture.

The location of the historic properties identified as part of the AIS are shown in Figure 20, with further detail provided in the AIS Report (Appendix K). The evaluation of integrity and significance of each property is summarized in Table 3.

**Table 3. Historic Property Integrity, Significance, and Recommended Mitigation**

SIHP #	Description	Integrity						Significance <sup>1/</sup>	Recommended Mitigation	
		Location	Design	Setting	Materials	Workmans	Feeling			Association
50-50-04-08805	Subsurface cultural deposit complex (associated with soil enrichment activities)	•		•	•	•			Criterion d	Archaeological monitoring
50-50-04-09164	Remnant water control ditch	•	•	•	•	•			Criterion d	No further work
50-50-04-09165	Artifact scatter (HC&S Camp Seven)	•		•	•		•	•	Criterion d	Archaeological monitoring
50-50-04-09166	Water control ditch or flume foundation remnant	•	•	•	•	•			Criterion d	No further work

NOTES:  
1/ Pursuant to HAR Section 13-284-6, to be considered significant, a historic property must possess integrity of location, design, setting, materials, workmanship, feeling, and/or association and meet one or more significance criteria. Criterion d applies to properties that “have yielded, or is likely to yield, information important for research on prehistory or history.”

As shown on Figure 20, two of these properties fall within the Project site (SIHP # 50-50-04-08805 Features C and D and SIHP #50-50-04-09165). The Project has the potential to affect the historic properties within the Project site; in accordance with HAR Section 13-13-284-7, the effect recommendation for the Project is “effect, with agreed upon mitigation commitments.” The recommended mitigation, as presented in the AIS Report, is summarized below.

- Conduct on-site archaeological monitoring for all Project-related ground disturbance within the boundaries of SIHP # 50-50-04-08805. On-site archaeological monitoring would provide an opportunity to gather additional information important for research on the history of this subsurface cultural deposit.
- Conduct on-site archaeological monitoring for all Project-related ground disturbance within the historic property boundary of SIHP #50-50-04-09165. On-site archaeological monitoring would provide an opportunity to gather additional information important for research on the history of HC&S Camp Seven.
- Conduct on-site archaeological monitoring for any open excavation that extends more than 4 feet below the ground surface. On-site archaeological monitoring of deep, open excavations that extend beneath the agricultural plow zone would ensure that any additional subsurface features or potential historic properties are promptly identified and mitigated. Project-related open excavations that are anticipated to extend more than 4 feet below the current ground

surface are anticipated to include trenching for the subsurface conduit and excavation or grading for the concrete equipment pads and substation/switchyard foundations.

- Conduct on-call archaeological monitoring for shallow excavations (less than 4 feet below the ground surface) as well as the mechanical installation of the single-axis tracker posts that are driven into the ground without excavation or exposure of sediment. An archaeologist would be on-call and available to conduct archaeological monitoring in the event of significant findings.

In a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation (Appendix K). Archaeological monitoring, as summarized above, would be conducted based on an archaeological monitoring plan (AMP) that has been reviewed and accepted by SHPD prior to Project initiation, in accordance with HAR Section 13-279-4. A Draft AMP is being developed and will be submitted to SHPD for review and acceptance.

### 6.1.2 Cultural Resources

To evaluate the potential effect of the Project on cultural beliefs, practices, and resources, including traditional cultural properties, Cultural Surveys Hawai‘i conducted a Cultural Impact Assessment (CIA). The assessment included archival research regarding Hawaiian activities including ka‘ao (legends), wahi pana (storied places), ‘ōlelo no‘eau (proverbs), oli (chants), mele (songs), traditional mo‘olelo (stories), traditional subsistence and gathering methods, ritual and ceremonial practices; background research focused on land transformation, development, and population changes beginning with the early post-Contact era to the present day. Cultural documents, primary and secondary cultural and historical sources, historic maps, and photographs were reviewed for relevant information. The results of these efforts are detailed in the CIA contained in Appendix L.

As part of the CIA process, community consultation was conducted to obtain input from knowledgeable individuals regarding present and past uses, cultural sites, traditional gathering practices, cultural association and any associated cultural concerns. This effort included outreach to approximately 46 native Hawaiian organizations, agencies and community members, as well as cultural and lineal descendants. A total of seven people responded, with one person agreeing to participate in a formal interview. Dr. Scott Fisher, Chief Conservation Officer of the Hawaiian Islands Land Trust (HILT), chief of the Maui Lana‘i Island Burial Council (MLIBC), and kama‘āina (native born), was interviewed on January 31, 2024. Through this interview, Dr. Fisher provided information regarding ‘ulu and kalo cultivation along Waikapū Stream, historical events (such as the Battle of Kama‘oma‘o), the practice of burials in areas with sand dunes, as well as previous land uses related to the sugarcane plantation and military use. In addition, he expressed concern regarding the potential visual impacts of the Project and voiced support for decentralized renewable energy systems in each ahupua‘a. He also expressed concern regarding potential water quality impacts to Waikapū Stream, as it is located just east of the Project study area, and Keālia Pond, as it is the *muliwai* (river mouth) of Waikapū Stream and provides habitat for endangered and migratory birds. Additional details regarding this interview and overall community consultation process are contained in the CIA (Appendix L).

Based on the results of community consultation and background research, the CIA identified the following cultural resources and practices within Waikapū Ahupua‘a:

- Freshwater resources (Waikapū Stream and Keālia Pond)
- Agricultural practices (kalo, ‘ulu, and ‘uala [sweet potato])
- Gathering plant resources for lā‘au lapa‘au in the uplands of Waikapū Valley and along Waikapū Stream
- Burial practices and sites

No ongoing cultural practices or cultural resources were identified within the Project site based on the background research and community consultation. The Project is located in the general vicinity of ongoing cultural practices associated with ‘ulu and kalo cultivation; however, these practices are not occurring within or immediately adjacent to the Project site. As discussed in Section 3.2, the Project has been specifically designed to be set back from Waikapū Stream by a minimum of approximately 650 feet; additionally, measures would be implemented to avoid and minimize potential downstream impacts to water quality (see Section 6.3.1.1). The Project site is not located within the Pu‘uone sand dunes or other areas known to contain burials, nor were any pre-Contact historic properties or human skeletal remains identified during subsurface testing for the AIS. However, given the potential for discovery of previously unknown cultural resources, archaeological monitoring would be conducted, as discussed in Section 6.1.1. In addition, consistent with the recommendations received through the CIA consultation process, the following measures would be implemented:

- Project construction workers and all other personnel involved in construction and related activities for the Project would be informed of the possibility of inadvertent cultural finds, including human remains.
- If any potential historic properties are identified during construction, all activities would cease and the SHPD would be notified pursuant to HAR Section 13-280-3.
- If iwi kūpuna (Native Hawaiian skeletal remains) are identified, all earth moving activities in the area would stop, the area would be cordoned off, and SHPD and the Maui Police Department would be notified pursuant to HAR Section 13-300-40. In addition, in the event of an inadvertent discovery of human remains, a burial treatment plan would be prepared in compliance with HAR Section 13-300 and HRS Chapter 6E-43.
- Should iwi kūpuna and/or cultural finds be encountered during construction, AES would consult with cultural and lineal descendants of the area to develop a reinternment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance.

Based on information gathered from the cultural and historical background research and community consultation conducted for the CIA, and with implementation of the measures outlined above, no adverse impacts to cultural resources, including traditional and customary practices, are anticipated from Project implementation.

### 6.1.2.1 Ka Pa‘akai Analysis

In *Ka Pa‘akai v. Land Use Commission*, 94 Hawai‘i 31, 74, 7 P.3d 1068, 1084 (2000), the Court held the following analysis be conducted:

- The identity and scope of valued cultural, historical, or natural resources, including the extent to which traditional and customary native Hawaiian rights are exercised in the Project site;
- The extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and
- The feasible action, if any, to be taken by the Land Use Commission to reasonably protect native Hawaiian rights if they are found to exist.

Based on information gathered from the cultural and historical background research as well as community consultation for the Project, a former historic plantation worker camp (Camp Seven), a post-Contact historic property associated with commercial agriculture, and two gulches (Pōhākea and Pale‘a‘ahu) occur within the Project site. Waikapū Stream, which flows into Keālia Pond, is located nearby (approximately 650 feet to the east).

Camp Seven was previously located along the western boundary of the Project site but has since been demolished for expansion of agricultural fields. The only other historic property known to occur within the Project site comprises post-Contact features related to commercial agriculture; however, it is recognized that there is also a possibility for inadvertent discovery of subsurface cultural resources. Mitigation measures related to historic properties within the Project site, as recommended by the AIS and community consultation, are presented in Section 6.1.1 and 6.1.2.

Freshwater resources within the Project site include two gulches – Pale‘a‘ahu Gulch and Pōhākea Gulch; however, these are ephemeral features and typically only flow during stormwater events. The Project has been specifically designed to include a 200-foot buffer around these features<sup>37</sup> as well as to be set back from Waikapū Stream by a minimum of approximately 650 feet; additionally, measures would be implemented to avoid and minimize indirect impacts to water quality as described in Section 6.3.1.1.

At present, there is no documentation or testimony indicating traditional or customary Native Hawaiian rights are currently being exercised “for subsistence, cultural and religious purposes and possessed by ahupua‘a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (Hawai‘i State Constitution, Article XII, Section 7) within the Project site. While no cultural resources, practices, or beliefs were identified as currently existing within the Project site, Waikapū Ahupua‘a maintains a rich cultural history in the exercise of traditional or customary Native Hawaiian rights within the project ahupua‘a. Additional detail supporting the Ka Pa‘akai Analysis is provided in the CIA (Appendix L).

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<sup>37</sup> Based on the location of Maui Electric’s existing 69kV transmission lines, which were identified by the utility as potential grid interconnection points, the interconnection lines for the Project would cross into 200-foot buffer; all other Project equipment has been sited to avoid these areas.

### 6.1.3 Trails and Access

Based on background research conducted for the AIS and CIA, no traditional trails were identified within the Project study area. As discussed in the CIA (Appendix L), a traditional Hawaiian kerbstone trail remnant (SIHP # 50-50-09-03191) is located along a prominent ridge of Mauna Kahālāwai, approximately 1.1 mile west of the Project site. According to Apple (1965), this is a traditional Hawaiian pedestrian trail that was later modified to be used as a horse trail. Robins et al. (1994) stated the “trail diverges from the Lahaina Pali trail at approximately 800 feet above mean sea level and heads *mauka* [...] The Lahaina Pali trail appears to have been constructed over Site 50-50-09-3191 trail.”

Similarly, no contemporary trails are located within or near the Project site. The nearest recreational trails identified by Na Ala Hele are the Lahaina Pali Trail, located approximately 1.1 mile west of the Project site, and Maui Motocross Track (Maui Raceway Park), located just east of Maui Veterans Highway approximately 1.8 miles from the Project site (see Figure 18; State of Hawai‘i 2024). Two trails associated with the Keālia Pond National Wildlife Refuge – the Keālia Coastal Boardwalk and the Kanuimanu Dike Trail – are located approximately 0.6 miles and 1.2 miles southeast of the Project site, respectively (USFWS 2024). The nearest beach access points (providing access to Mā‘alaea Beach) are located more than 0.6 miles from the Project site (County of Maui 2024a).

As no trails or beach access points are located within the Project site, the proposed solar and energy storage facility would not adversely affect traditional or public access.

## 6.2 Socioeconomic Resources

*This section addresses the information requirements related to potential socioeconomic impacts as specified in Section IIF of MAPPs for a CSUP/SSP.*

### 6.2.1 Employment and Project Expenditures

Project implementation would be expected to provide socioeconomic benefits associated with additional jobs, labor income, and economic output. These benefits were estimated using the IMPLAN economic model, which was fitted with data for Maui County. IMPLAN is a commercially available economic modeling package widely used to assess the economic impacts of renewable energy and other types of projects. Separate analyses were conducted for multiple aspects of the Project including (1) pre-development, (2) construction, (3) operations, (4) lease payments that would support existing agricultural operations, (5) payments associated with community benefits package provided under the power purchase agreement, and (6) decommissioning of the project. Pre-development and construction aspects of the project are considered short-term; operations, lease payments, and payments associated with the community benefits package are considered long-term; and decommissioning is considered individually as it would occur after other aspects of the project are complete. The results of the analysis

are summarized below and in Table 4, with financial-based results presented in Year 2025 dollar values; additional details are provided in Appendix M.<sup>38</sup>

Considering all aspects of the Project, over its lifetime, including direct, indirect, and induced effects,<sup>39</sup> the Project is estimated to generate or sustain up to approximately 1,541 total jobs in Hawai'i, \$89.6 million in labor income, and total economic output of \$251.9 million.

In the short-term, including direct, indirect, and induced effects, pre-development and construction of the Project would generate or sustain a total of 937 jobs to be filled primarily by Hawai'i residents, with approximately \$68.9 million in related labor income, and \$167.5 million in economic output. Considering only direct effects, pre-development and construction of the Project would generate or sustain approximately 658 jobs, \$52.2 million in labor income, and \$112.4 million in economic output. Direct jobs would include on-site employment (such as those associated with site work, foundations and electrical work), as well as engineering design, permitting and other similar types of in-state work. Select jobs may be filled by out-of-state workers such as specialty trade and/or professional staff that would be brought to Hawai'i for the Project; in many cases, these staff would serve to train the local workforce and commission certain components per manufacturer requirements.

Once operational, the Project would continue to contribute to the state economy over its lifetime, including Project-related employment and expenditures, annual lease payments that would support the landowner's existing agricultural operations, compatible agriculture operations, and community benefits contributions. It is estimated that on an annual basis, the Project would generate or sustain 18 total (direct, indirect, and induced) jobs in Hawai'i, approximately \$0.5 million in labor income, and total economic output of approximately \$2.4 million. Aggregated over its full lifespan, the Project would generate approximately 527 total jobs in Hawai'i, approximately \$15.2 million in labor income, and total economic output of approximately \$64.7 million.

Decommissioning of the Project would involve removing all facilities and returning the Project site to substantially the same condition as existed prior to Project development. Project decommissioning would directly employ workers from Hawai'i, as well as support additional secondary (indirect and induced) benefits in Maui County. In-state expenditures on equipment and material recycling/salvage and disposal, and remediation, as well as spending on household goods and services by workers living in the area would all support additional economic activity elsewhere in the state economy. It is estimated that Project decommissioning would generate or sustain 77 total (direct, indirect, and induced) jobs in Hawai'i, approximately \$5.4 million in labor income, and total economic output of approximately \$19.6 million.

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<sup>38</sup> Economic modeling assumes a 25-year operational term; variations in operational (long-term) economic and fiscal impacts are discussed in Appendix M.

<sup>39</sup> Direct impacts are associated with the Project itself and include workers directly associated with initial Project-related expenditures, the incomes earned by those workers, and the economic output generated by these initial Project-related expenditures. Indirect impacts are generated by the businesses that would supply goods and services that would facilitate various aspects of the Project. Indirect jobs include jobs at companies that supply goods and services that support direct activities. Induced impacts are generated by household spending associated either directly or indirectly with the Project (e.g., use of income to purchase groceries and other household goods and services).

**Table 4. Estimated Economic Impacts**

Type of Impact <sup>1/2/</sup>	Total Jobs	Labor Income (\$000s) <sup>3/</sup>	Economic Output (\$000s) <sup>3/</sup>
<b>Short-Term (One-Time Impacts)</b>			
<b>Pre-Development (approximate 4-year timeframe)</b>			
Direct Impacts	43	2,082	5,555
Indirect Impacts	13	723	2,061
Induced Impacts	10	575	1,842
<b>Total Impacts</b>	<b>65</b>	<b>3,380</b>	<b>9,457</b>
<b>Construction (approximate 14-month timeframe)</b>			
Direct Impacts	615	50,155	106,822
Indirect Impacts	71	4,295	15,723
Induced Impacts	187	11,107	35,545
<b>Total Impacts</b>	<b>872</b>	<b>65,557</b>	<b>158,089</b>
<b>Long-Term (Over Project Lifetime)</b>			
<b>Operation (25-year totals)</b>			
Direct Impacts	53	6,481	29,482
Indirect Impacts	24	1,430	4,284
Induced Impacts	27	1,622	5,190
<b>Total Impacts</b>	<b>104</b>	<b>9,533</b>	<b>38,956</b>
<b>Lease Payments (30-year totals)</b>			
Direct Impacts	356	2,372	17,160
Indirect Impacts	29	960	1,956
Induced Impacts	11	635	2,029
<b>Total Impacts</b>	<b>396</b>	<b>3,967</b>	<b>21,145</b>
<b>Community Benefits Package (25-year totals)</b>			
Direct Impacts	18	1,233	3,000
Indirect Impacts	5	234	685
Induced Impacts	5	293	938
<b>Total Impacts</b>	<b>27</b>	<b>1,761</b>	<b>4,623</b>
<b>Decommissioning (One-Time Impacts)</b>			
<b>Decommissioning (approximate 1-year timeframe)</b>			
Direct Impacts	40	3,112	12,500
Indirect Impacts	22	1,347	4,235
Induced Impacts	15	901	2,883
<b>Total Impacts</b>	<b>77</b>	<b>5,360</b>	<b>19,619</b>
<b>TOTAL</b>	<b>1,541</b>	<b>89,558</b>	<b>251,888</b>

NOTES:

1/ Numbers may not sum due to rounding.

2/ Direct impacts are associated with the Project itself and include workers directly associated with initial Project-related expenditures, the incomes earned by those workers, and the economic output generated by these initial Project-related expenditures. Indirect impacts are generated by the businesses that would supply goods and services that would facilitate various aspects of the project. Indirect jobs include jobs at companies that supply goods and services that support direct activities. Induced impacts are generated by household spending associated either directly or indirectly with the Project (e.g., use of income to purchase groceries and other household goods and services).

3/ Labor income and economic output are expressed in thousands of dollars in Year 2025 dollars.

## 6.2.2 Population and Housing

Based on the most recent national census data (2020), Maui County’s population was estimated to be 164,754 (U.S. Census Bureau 2024). The communities proximate to the Project site include the main urban areas of Kahului and Wailuku to the north, Waikapū to the west, Kīhei to the south, and Makawao to the east. Total estimated population, housing units, and homeowner vacancy rate for Maui County and the above-listed communities based on the most recent census data are listed in Table 5. Although not reflected in these numbers, the COVID-19 pandemic and 2023 wildfires have impacted Hawai‘i’s population in a multitude of ways, including significant economic losses and a severe housing shortage (HiEMA 2020; County of Maui 2023).

**Table 5. Population, Housing Units, and Vacancy Rate (2020)<sup>1/</sup>**

Community (Direction from Project)	Total Population	Total Housing Units <sup>2/</sup>	Homeowner Vacancy Rate
Maui County	164,754	71,439	1.3%
Kahului (North)	28,152	8,086	0.6%
Wailuku (North)	23,416	8,325	0.7%
Waihee-Waikapū (West)	7,413	2,291	0.6%
Kīhei (South)	24,136	14,507	1.5%
Makawao-Pā‘ia (East)	20,917	7,901	0.6%
NOTES: 1/ 2020 Decennial Census Results (U.S. Census Bureau 2024) 2/ The Census Bureau defines a housing unit as a house, an apartment, a group of rooms, or a single room occupied or intended for occupancy as separate living quarters.			

The Project is not expected to affect the population size of any of the surrounding communities or Maui as a whole. The workers hired for construction would primarily be Hawai‘i residents and over the long-term, only a handful on onsite staff would be required, such that the Project is not expected to increase the demand for housing or otherwise contribute to a shortage in housing availability.

As shown on Figure 19, the closest residential structures to the Project site include condominium units in Mā‘alaea and the outskirts of Kīhei, approximately 0.8 miles to the southwest and 2 miles to the southeast (respectively). The nearest residences to the north are on the opposite side of Kūihelani Highway, approximately 2 miles away, in Waikapū and the outskirts of Kahului. As further discussed in Section 6.3.2, the Project would not result in a significant visual impact on any nearby residence, nor are any properties expected to experience Project-related glare. Furthermore, the Project would not have any impact on local community services or educational and recreational facilities, as described in Section 8. Additionally, no significant traffic impacts would result from Project construction or operation (see Section 7.4). For these reasons, the Project is not expected to adversely affect property values.

## 6.3 Environmental Resources

*This section addresses the information requirements related to potential environmental impacts as specified in Sections IIG and IIIC(4) of MAPPs for a CSUP/SSP.*

### 6.3.1 Environmentally Sensitive Areas

#### 6.3.1.1 Streams, Wetlands, and Other Surface Water Features

Streams, wetlands, and other surface water features within and directly adjacent to the Project study area were initially identified based on available datasets (including the National Hydrography Dataset [NHD; USGS 2023], National Wetland Inventory [NWI; USFWS 2023a], and Hawai'i Division of Aquatic Resources [DAR; DAR 2008]) and further evaluated through a field delineation effort conducted by Tetra Tech in July 2023. Based on the results of these efforts, no wetlands are known to occur within or directly adjacent to the Project site. The only surface water features identified within or adjacent to the Project site are Waikapū Stream, Pale'a'ahu Gulch, and Pōhākea Gulch (Figure 21).<sup>40</sup> These features are discussed below, with additional details provided in the delineation report (Appendix N).

Waikapū Stream is a perennial stream that originates on Mauna Kahālāwai and is part of the four streams collectively known as Nā Wai 'Ehā (Waikapū, Wailuku, Waiehu, and Waihe'e streams) which drain the eastern part of West Maui. This stream flows eastward along the edge of Waikapū then turns toward the southeast, passing east of the Project site, beyond which it discharges into wetlands surrounding Keālia Pond; connectivity to Keālia Pond only occurs during and following periods of rainfall (Oki et al. 2010). Keālia Pond, located approximately 0.3 miles south of the Project site, is one of Hawai'i's largest remaining natural wetland and coastal salt marsh habitats. This area was designated as a National Wildlife Refuge in 1992 to preserve, restore, and manage essential habitat for two endangered Hawaiian waterbirds: Hawaiian stilt/ae'o (*Himantopus mexicanus knudseni*) and Hawaiian coot/'alae ke'oke'o (*Fulica alai*) (USFWS 2011a).

Pale'a'ahu Gulch and Pōhākea Gulch, both of which occur within the Project site, also originate on Mauna Kahālāwai and flow toward Keālia Pond (USGS 2023; MEC 2023); however, these non-perennial features are ephemeral and only carry water during or immediately following heavy rain events. Evidence of previous water flow was observed in these gulches, but no surface water was present during site visits in July, September, and November 2023 (Tetra Tech 2023).

As detailed in Section 3.2, the Project was designed to be set back a minimum of 650 feet from Waikapū Stream. One of the existing plantation roads that would be used to access the Project site (Cane Haul Road) crosses Waikapū Stream via an at-grade concrete ford; the Project would not involve any improvements or upgrades to this crossing, nor would any other form of ground disturbance occur within the boundaries of Waikapū Stream.

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<sup>40</sup> Several other features were delineated, including a tributary to Waikapū Stream and roadside ditch. These features were found to be non-jurisdictional and would not be affected by the Project, and therefore are not discussed further herein.

In addition to being set back from Waikapū Stream, the Project also incorporates a 200-foot buffer along Pale‘a‘ahu Gulch and Pōhākea Gulch. No solar modules, battery energy storage equipment, or substation/switchyard facilities would be located within this buffer. Additionally, no improvements would be made to any of the existing roads within 200 feet of these gulches (including the crossings at South 8<sup>th</sup> Street and 9<sup>th</sup> Street). However, given the location of Maui Electric’s existing transmission lines relative to both Pōhākea Gulch and Pale‘a‘ahu Gulch, installation of the interconnection lines to reach the designated GCPs identified by Maui Electric would necessitate a limited amount of work proximate to each of these gulches. As Maui Electric prohibits work by any other entity within their energized electrical corridor, work to be conducted by AES in the vicinity of either gulch would terminate at the nearest poles outside the energized corridor (i.e., dead-end poles).<sup>41</sup> The dead-end poles and associated work areas have been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; the poles would be approximately 88 feet and 120 feet from the centerline of Pōhākea Gulch, and approximately 70 and 80 feet from the centerline of Pale‘a‘ahu Gulch.<sup>42</sup> Construction activities to be conducted by AES for the interconnection line (e.g., installation of poles and work pads, or associated vegetation clearing) would not involve any work within 50 feet of either gulch. The Project would also require two overhead spans of medium-voltage electrical collector lines (and associated optical ground wire and shield wire) across Pale‘a‘ahu Gulch just southeast of South 8<sup>th</sup> Street. The poles to support these overhead lines would be installed more than 200 feet from Pale‘a‘ahu Gulch, and no grading would occur within 200 feet of the gulch. Vegetation trimming/removal would be conducted within an approximately 20-foot-wide corridor for each span (as needed to maintain a minimum 20.5-foot clearance between the surrounding vegetation and each electrical line); however, no vehicles or heavy equipment would operate within the gulch boundaries.

Indirect impacts to surface water features can include changes in drainage patterns, decreased infiltration and increased volume or velocity of stormwater runoff, and/or discharge of pollutants to downstream waters. As discussed in Section 7.3, the Project would incorporate site design strategies using LID techniques to maintain hydrologic and hydraulic functions and would not be expected to substantively alter existing drainage patterns within the Project site. Although the Project would add new impervious surfaces to the Project site, which can increase stormwater runoff, it is expected that impervious surfaces would increase by no more than approximately 12.8 acres (or 2.7 percent) of the overall 476.303-acre Project site (see Table 1); the new impervious surfaces would be associated with the support foundations for the racking system, equipment pads, substation, switchyard and interconnection facilities, onsite storage containers, and internal access routes. Other than the area occupied by the support foundations for the racking system, the ground beneath and around the solar photovoltaic modules would be maintained as a natural, pervious surface that is able to absorb and

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<sup>41</sup> Work within the energized corridor, which is expected to involve similar activities to those described herein, would be designed and constructed by Maui Electric. Detailed design information for this work would be included in Maui Electric’s application to the PUC to interconnect the Project. This process, is expected to be initiated by Maui Electric in late 2025 or early 2026.

<sup>42</sup> These specifications are subject to Maui Electric’s final design and subsequent PUC approval.

infiltrate rainfall, thus minimizing surface runoff within the solar arrays. Disturbed areas around the solar modules would be revegetated (either through regrowth of existing vegetation or with hydroseeding, as needed) such that erosion would not be expected to occur downgradient of the modules.

To further minimize the potential for stormwater-related impacts, the Project would also incorporate stormwater retention BMPs during and post-construction to maintain peak flows below pre-development levels. As discussed in Section 3.5.2, these BMPs would include drainage basins installed along the downgradient edge of new impervious surfaces to retain and allow for infiltration or evapotranspiration of stormwater runoff generated by the Project. Once operational, the water requirements for the Project would be minimal and would not measurably contribute to stormwater runoff. As detailed in Section 3.7, the Project would be decommissioned at end of its useful life, including removal of Project equipment and returning the Project site to its existing condition (or comparable), which would effectively reduce the amount of impervious surface area to the current level. Given the relatively minimal increase in impervious surfaces (and subsequent removal as part of Project decommissioning), coupled with the site design strategies and stormwater infiltration measures, the Project would not be expected to substantially affect stormwater discharge to streams, wetlands, or other surface waters.

To address the potential for downstream water quality impacts associated with increased sediment and other pollutants (for example, trace oil, grease, and fuel) in stormwater runoff, a SWPPP would be prepared as part of the application for Notice of General Permit Coverage for construction-related stormwater runoff, pursuant to NPDES regulations. The SWPPP would identify BMPs including minimization of soil disturbance (particularly during periods of heavy rain), erosion prevention and sediment control measures (e.g., silt fencing), proper stabilization and stockpiling procedures, and good housekeeping measures that would be implemented to prevent and minimize discharge of pollutants to downstream waters. The BMPs to be implemented would also be detailed in an Erosion Control Plan, which would be submitted along with a drainage plan and report, as part of the application for a grading permit from the County of Maui pursuant to the requirements of MCC Chapter 20.08. As previously described, in addition to construction BMPs, drainage basins would provide long-term detention and biofiltration of stormwater within the Project site. Implementation of these measures would minimize the potential for discharge of sediment and other pollutants in stormwater runoff, such that significant water quality impacts to downstream waters are not anticipated. Accordingly, it is expected that the Project would be in compliance with the County of Maui's rules relating to soil erosion and sedimentation control and storm drainage facilities, as well as the State's water quality standards, which establishes basic water quality criteria and requires that water quality be maintained to protect existing uses as specified in HAR Section 11-54.

#### **Jurisdictional Determination of Waters of the U.S.**

Water features, including wetlands and streams, that are determined to be Waters of the U.S. are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act; placement of dredged or fill material within jurisdictional Waters of the U.S. requires authorization. The

delineation conducted by Tetra Tech evaluated applicable limits of USACE jurisdiction in accordance with the revised definition of Waters of the U.S. (conforming rule) which became effective in September 2023 (EPA 2024).<sup>43</sup>

The results of the delineation indicated that Pōhākea Gulch and Pale‘a‘ahu Gulch are not likely to be jurisdictional because these features do not meet the relatively permanent standard and only flow for short periods in response to precipitation. Waikapū Stream is likely a jurisdictional Waters of the U.S., and therefore subject to regulation under the Clean Water Act, because its flow to a traditional navigable water is continuous during certain times of the year. The delineation report was submitted to the USACE for review and verification; on January 29, 2025, the USACE provided written concurrence with the conclusions of the delineation report (see Appendix N). As the Project would not involve discharge of fill material to a jurisdictional Waters of the U.S., authorization is not required from USACE.

#### **Maui County Ordinance 5421 (Relating to Wetlands Restoration and Protection)**

Under Ordinance 5421, the County of Maui Planning Department produced a wetland overlay map showing the approximate location of wetlands and other waters throughout the county; this map identifies two features within the Project site – Pōhākea Gulch and Pale‘a‘ahu Gulch – with a 200-foot buffer surrounding each feature (see Figure 22; County of Maui 2024b). As previously described, the Project layout accommodates this 200-foot buffer; no Project components, with the exception of a limited amount of the interconnection lines to be constructed by Maui Electric, would be located within the buffer. Consistency with this ordinance is further discussed in Section 10.2.2.4.

#### **6.3.1.2 Coastal Waters, Shoreline, and Estuarine Areas**

The Project site is located approximately 0.5 miles from Mā‘alaea Bay; it does not include any coastal waters, shoreline, or estuarine areas.

#### **6.3.1.3 Sea-Level Rise Exposure Area**

The Project is not expected to be affected by sea-level rise as it is located at a sufficient distance and elevation from the shoreline. Based on mapping of the exposure area associated with approximately 3.2 feet of sea-level rise (see Figure 23), the nearest areas of exposure are approximately 0.3 miles southwest of the Project site (Hawai‘i Climate Change Mitigation and Adaptation Commission, 2021).

#### **6.3.1.4 Tsunami Inundation Zone**

The hazard risk associated with tsunami inundation throughout Hawai‘i are depicted on tsunami evacuation maps, which define the tsunami evacuation zone based on distant tsunami events that have

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<sup>43</sup> The January 2023 Rule relates to the "Revised Definition of 'Waters of the United States'" rule that was published in the Federal Register on January 18, 2023 (Department of Army and EPA 2023a) and became effective on March 20, 2023. Subsequently, in August 2023, the U.S. Environmental Protection Agency (EPA) and USACE issued a final rule to amend the January 2023 Rule to conform to the definition in the U.S. Supreme Court's May 2023 decision in the case of *Sackett v. Environmental Protection Agency*; the conforming rule became effective on September 8, 2023. Notably, the conforming rule removed the significant nexus standard and revised the definition of "adjacent" to mean "having a continuous surface connection" (Department of Army and EPA 2023b). The Honolulu District is currently interpreting Waters of the U.S. under the January 2023 Rule, as amended by the conforming rule.

previously impacted Hawai'i over the past 100 years (NOAA 2024; HiEMA 2024). As shown on Figure 23, the Project site is located outside of the tsunami evacuation zone, such that none of the Project equipment would be constructed within this area. Therefore, it is extremely unlikely that conditions associated with tsunami inundation would impact the Project, nor is the Project expected to increase the risk of tsunami inundation or affect tsunami evacuation routes.

#### 6.3.1.5 Flood Hazard Zones

Potential flood hazards are identified by the Federal Emergency Management Agency (FEMA) National Flood Insurance Program and are mapped on the Flood Insurance Rate Maps (FIRM). The maps classify land into different zones depending on the potential for flood inundation. The flood zone classifications for the Project site were obtained from the Hawai'i National Flood Insurance Program (NFIP) Flood Hazard Assessment Tool (DLNR 2024).

As shown in Figure 24, the majority of the Project site is within a low to moderate risk flood zone, designated by FEMA as Zone X (those areas determined to be outside the 0.2-percent annual chance floodplain); the remainder of the Project site is designated as Zone A (those areas with a one percent annual chance for flooding; DLNR 2024). As detailed in the site development plan set (Sheet 9; Appendix D), the solar modules, battery energy storage equipment, and substation/switchyard facilities have been specifically sited to avoid the areas designated as Zone A and would be located entirely within areas designated as Zone X. Given the location of the Maui Electric's existing 69kV electrical transmission lines, the interconnection lines for the Project would traverse the area designated as Zone A. The lines and supporting poles would be designed to comply with applicable codes and Maui Electric standards, including sufficient scour (erosion) and flood tolerant embedment depths and foundations, and therefore would not be susceptible to flooding nor contribute to increased flood risk. As such, the Project would not be expected to result in any flood-related impacts.

#### 6.3.1.6 Threatened and Endangered Species

As further detailed in Section 6.3.3.3, no federally or state listed threatened, endangered, proposed listed, or candidate plant species have been recorded within the Project site. Two federally or state listed wildlife species – the federally-threatened and state-endangered Hawaiian goose/nēnē (*Branta sandvicensis*) and the endangered Blackburn's sphinx moth (*Manduca blackburnii*) – have been documented onsite. Although not observed, several other federally or state listed wildlife species also have the potential to occur within or traverse over the Project site, including the endangered Hawaiian hoary bat/ōpe'ape'a (*Lasiurus semotus*), listed seabirds (endangered Hawaiian petrel/ 'ua'u [*Pterodroma sandwichensis*], threatened Newell's shearwater/ 'a'o [*Puffinus newelli*], and endangered band-rumped storm-petrel/ 'akē'akē [*Hydrobates castro*]), and Hawaiian waterbirds (the endangered Hawaiian stilt/ ae'o and Hawaiian coot/ 'alae ke'oke'o). Consistent with recommendations provided by the U.S. Fish and Wildlife Service (USFWS) and the State of Hawai'i DLNR Division of Forestry and Wildlife (DOFAW), impact avoidance and minimization measures for listed species would be implemented; these measures are listed in Section 6.3.3.4. With implementation of these measures, the Project would not be expected to result in significant adverse impacts to any federally or state-listed species.

### 6.3.1.7 Exceptional Trees

The Project site does not include any exceptional trees. Based on the biological resources survey conducted for the Project, trees within the Project site are generally limited to kiawe and koa haole; additional detail regarding vegetation within the Project site is provided in Section 6.3.3.1.

### 6.3.1.8 Protected Areas

As further discussed in Section 10.2.1.2, the Maui Island Plan identifies protected areas to promote the protection and availability of passive and active recreational amenities and other environmentally sensitive areas such as preservation areas, regional parks, greenways, greenbelts, and sensitive lands. The Project site does not fall within any protected areas identified in the Maui Island Plan, but does abut the northern boundary of the Keālia Pond National Wildlife Refuge Protected Area. The Project would not adversely impact Keālia Pond or the surrounding wetlands, nor would it interfere with the identified actions to preserve and enhance the refuge. As discussed above, the Project has been designed to avoid any surface water features that regularly contribute flows to Keālia Pond, including a minimum 650-foot setback from Waikapū Stream, as well as a protective buffer along Pale‘a‘ahu Gulch and Pōhākea Gulch. Furthermore, LID design techniques and stormwater retention measures have been incorporated into the Project, and BMPs would be implemented to prevent and minimize discharge of pollutants to downstream waters, such that no impacts to the Keālia Pond National Wildlife Refuge Protected Area are anticipated.

## 6.3.2 Scenic Resources

### 6.3.2.1 Visual Impacts

The Project site is located on Maui’s central isthmus, which is a relatively narrow plain stretching between the eastern slopes of Mauna Kahālāwai and the western slopes of Haleakalā. Much of Maui’s central isthmus was historically part of the HC&S sugarcane plantation, contributing to its overall rural character; views are dominated by expansive agricultural fields and associated infrastructure, as well as the surrounding natural environment. Since closure of the sugarcane plantation in 2016, the land in and around the Project site has comprised fallow fields dominated by ruderal vegetation, with some surrounding areas put back into cultivation with diversified crops and other agricultural uses (Mahi Pono 2025). As detailed in Section 5.6, nearby uses also include Mā‘alaea Power Plant to the south and AES Kūihelani Solar + Storage Project to the north; other existing and planned developments in this region are shown in Figure 18. These built components contribute to the visual setting, with the natural landscape as a backdrop. In particular, the visual setting of this region is dominated by views of Mauna Kahālāwai to the west, Haleakalā to the east, and Keālia Pond and the Pacific Ocean to the south.

During construction and operation, where visible and noticeable, the Project may introduce contrast and have the potential to create visual effects within the surrounding areas. Based on a viewshed assessment (which considers the extent to which terrain, but not existing vegetation or structures, may obstruct views), the Project site would be potentially visible from surrounding areas extending a few miles to the west (up to and including the slopes of Mauna Kahālāwai) with more distant viewpoints in the other directions (up to and including the western slopes of Haleakalā and the surrounding Pacific

Ocean. Within these areas, the degree of visibility would depend on distance, view angle, and the extent to which the Project components would blend into the surrounding visual environment. Greater view angles from higher elevations would allow for views of the Project from greater distances. However, with increasing distance, Project components (i.e. solar arrays, battery containers, substation and interconnection equipment) would blend into the surrounding agricultural land use and the natural vegetation patterns, resulting in less contrast. In general, it is anticipated that contrast would generally be stronger from viewpoints within approximately one mile of the Project site and would weaken as texture and color become muted and less detailed with distance. Project visibility may be further limited by existing vegetation, structures, and other intervening features.

A detailed visual assessment, including development of photo-realistic simulations, was conducted to further evaluate the extent to which Project components may be potentially visible and noticeable, taking into account intervening structures, vegetation, and terrain. Viewpoints were selected from publicly accessible locations (e.g., roadways and public rights of way) within the potential viewshed areas. In particular, this assessment considered scenic roadway corridors, including Honoapiʻilani Highway and North Kīhei Road, as well as mauka-to-makai and makai-to-mauka viewplanes from public access points.<sup>44</sup> Simulations were prepared for a total of 11 viewpoints; copies of the simulations and a detailed analysis are contained in Appendix O.

As illustrated by the simulations, the Project would be either completely screened or have limited visibility from many nearby viewpoints due to the relatively flat topography and surrounding vegetation. In areas where there is minimal screening by existing vegetation, such as along certain sections of Kūihelani Highway, the Project would introduce minor to moderate contrast to the landscape setting (e.g., see Viewpoint 3). However, Project components would appear as a sub-dominant feature within the landscape setting. Furthermore, travelers along Kūihelani Highway and other nearby roadways would be parallel to the Project for only a limited time and their focus would be on the road ahead and mountains in the distance, such that any visual impact in these locations would be minor and short-term. Areas with a greater view angle from higher elevations have a greater potential for views of the Project; however, visibility of Project components would diminish with distance. For example, from certain viewpoints in Wailuku Heights, the Project would introduce weak contrast to the landscape setting resulting in minor visual impacts (e.g., see Viewpoint 1). Although the Project would also be visible from similar elevations to the east, the Project components would barely be noticeable to the casual observer due to distance of the Project, resulting in negligible visual impacts (e.g., see Viewpoint 11).

Overall, it is anticipated that views of the Project would vary from completely screened to partially screened to unobstructed; however, visible portions of the Project would appear as sub-dominant to co-dominant features in the landscape setting and would be viewed in the context of surrounding features

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<sup>44</sup> Scenic roadway corridors were identified as part of the Scenic Resources Inventory and Mapping Project, which was conducted as an implementing action to the Maui Island Plan (Chris Hart & Partners, 2006). The Cultural Resources Overlay/Scenic Corridor Protection Map was utilized as part of the formulation process for the Maui Island Plan; however, neither the Scenic Resources Inventory and Mapping Project, nor the Cultural Resources Overlay/Scenic Corridor Protection Map, were included in the final plan.

including roadways, utility infrastructure, and agricultural operations. Given the relatively low profile of the solar photovoltaic modules, the Project would not block views of the ocean, Mauna Kahālāwai, or Haleakalā from surrounding areas. Similarly, the Project would not significantly impact views from scenic roadway corridors, including Honoapiʻilani Highway and North Kihei Road. BMPs to mitigate visual impacts as identified in *Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands* would be incorporated to the extent practicable (BLM 2013). These include addressing glare (see Section 6.3.2.2), minimizing disturbance and vegetation removal, avoiding commercial messages and symbols on the arrays, minimizing lighting, and good housekeeping. After decommissioning, the Project site would be returned to substantially the same condition as existed prior to Project development. Considering these factors, the Project is expected to have minimal impact on Maui County’s scenic and visual resources.

### 6.3.2.2 Glare

In general, solar modules are designed to absorb rather than reflect sunlight and incorporate a surface material that allows sunlight to pass with minimal reflection. The modules also have an anti-reflective coating that further reduces reflectivity. Regardless, solar facilities still have the potential to result in some degree of glare.<sup>45</sup> To evaluate the potential for glare associated with the Project, Tetra Tech completed a glare analysis using the Solar Glare Hazard Analysis Tool (SGHAT) software through an online tool (GlareGauge) developed by Sandia National Laboratories and hosted by ForgeSolar. A total of three glare analyses were conducted for the Project. The first two analyses modeled the points of view from an average first and second-floor structure, as well as those from a typical commuter car and commercial truck. These analyses included 26 observation points (OPs) and five segmented traffic routes from representative locations in proximal areas surrounding the Project. The third analysis included four final approach flight paths and one air traffic control tower associated with Kahului Airport (OGG). A detailed discussion of the input features associated with each analysis is provided in the Glare Analysis Report, contained in Appendix P.

The results of the analysis indicate that none of the modeled receptors (OPs, vehicular routes, flight paths) would experience any type of glare as a result of the Project. This predicted result is considered to be conservative, as the GlareGauge model does not account for varying ambient conditions (i.e., cloudy days, precipitation), atmospheric attenuation, intervening topography not located within the defined array layouts, or screening by existing or proposed vegetation and structures (including fences or walls). Based on these results, the Project is not expected to result in any glare impacts to surrounding areas.

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<sup>45</sup> As an industry standard, the term “glint and glare” analysis is typically used to describe an analysis of potential ocular impacts to defined receptors. As a point of clarification, ForgeSolar defines glint and glare in the following statement: “Glint is typically defined as a momentary flash of bright light, often caused by a reflection off a moving source. A typical example of glint is a momentary solar reflection from a moving car. Glare is defined as a continuous source of bright light. Glare is generally associated with stationary objects, which, due to the slow relative movement of the sun, reflect sunlight for a longer duration.” Based on the ForgeSolar definitions of glint and glare and the stationary nature of the solar photovoltaic modules related to the sun, the potential reflectance from the Project is referred to as glare.

The Federal Aviation Administration (FAA) Notice Criteria Tool (NCT) determines whether a proposed structure is in proximity to a jurisdictional air navigation facility and if formal submission to the FAA Obstruction Evaluation Group (OEG) under CFR Title 14 Part 77.9 (Safe, Efficient Use, and Preservation of the Navigable Airspace) is recommended. Based on the FAA NCT, the Project does not exceed the notice criteria and thus does not require formal filing with the FAA OEG. Regardless, the Project was formally filed with the FAA OEG to confirm the conclusions of the glare analysis; on August 19, 2025, FAA OEG issued a determination of No Hazard to Air Navigation for the Project (see Appendix P). Once the Project is operational, in the unlikely event that it is determined that the Project is creating a hazardous condition for pilots, AES would immediately mitigate the hazard upon notification by FAA and/or the State of Hawaii Department of Transportation (HDOT) Airports Division. Mitigation could include adjustments to the resting angle of the solar panels or other operational modifications that could limit the potential for glare.

### 6.3.3 Biological Resources

A biological resources survey was conducted within the Project study area over multiple dates in July 2023, September 2023, November 2023, May 2024, and July 2024. The purpose of the surveys was to characterize the species and habitats present, and to determine whether state or federally listed threatened or endangered species, or otherwise rare plants or animals have the potential to occur and could be impacted by construction or operation of the Project. The survey results are summarized below, with additional detail provided in the attached survey report (Appendix Q).

As part of the due diligence phase, AES proactively consulted with USFWS and DOFAW to obtain feedback regarding federally and state listed species that could potentially occur within the Project study area and Project-specific measures that should be implemented to avoid and minimize potential impacts to those species. Consultation letters were received from USFWS and DOFAW on September 6, 2024 and February 3, 2025, respectively; copies of these consultation letters are also contained in Appendix Q. The impact avoidance and minimization measures listed herein reflect the input received from USFWS and DOFAW.

#### 6.3.3.1 Vegetation

The results of the biological resources survey indicate that the vegetation within the Project study area is dominated by non-native species. Only two native plant species were observed in the Project study area — ‘uhaloa (*Waltheria indica*) and ‘ilima (*Sida fallax*); these plants are indigenous and are not considered rare throughout the Hawaiian Islands (Wagner et al. 2023). No federally or state listed threatened, endangered, proposed listed, or candidate plant species were observed in the Project study area during the biological surveys.

The Project study area is characterized by fallow agricultural fields, formerly cultivated in sugar cane, that are now predominately covered by Buffelgrass Grassland. In addition to buffelgrass, other dominant species in this vegetation type include lion’s ear (*Leonotis nepetifolia*), golden crown-beard (*Verbesina encelioides*), a mixture of various herbs and grasses such as Cuban jute (*Sida rhombifolia*), smooth rattlepod (*Crotalaria pallida*), fireweed (*Senecio madagascariensis*), swollen finger grass (*Chloris*

*barbata*), common sandbur (*Cenchrus echinatus*), and Bermuda grass (*Cynodon dactylon*). Widely dispersed individuals of kiawe and koa haole are also present.

The vegetation in the southwestern portion of the Project site and along the Pale‘a‘ahu Gulch corridor is characterized as Kiawe/Koa Haole Forest. This vegetation type is dominated by kiawe and koa haole trees, with moderately dense to open cover of these species. Various species are scattered throughout this vegetation type including klu (*Acacia farnesiana*), castor bean (*Ricinus communis*), small crown flower (*Calotropis procera*), sourbush (*Pluchea carolinensis*), and *Macaranga tanarius*. The understory is predominately buffelgrass with scattered patches of Guinea grass (*Megathyrsus maximus*), hairy abutilon (*Abutilon grandifolium*), golden-crown beard, and a suite of herbs and grasses similar to those found in the Buffelgrass Grassland. Non-native tree tobacco (*Nicotiana glauca*), a larval host plant for the endangered Blackburn’s sphinx moth, was also observed scattered throughout this vegetation type.

Direct impacts to vegetation would occur primarily as a result of clearing and ground disturbance during construction. However, the Project site has been extensively disturbed as part of previous agricultural operations, with existing vegetation largely comprised of non-native species. Following construction, areas that have been temporarily disturbed may be revegetated to stabilize soil and prevent erosion; however, minimal revegetation is expected to be required as site preparation methods would limit impact to underlying root structures, thus encouraging regrowth of existing vegetation. Revegetation, if needed, is expected to involve application of hydroseeding with a suitable mix of native and/or non-invasive grass species.

To minimize the potential for introduction and spread of invasive species during construction and revegetation activities, construction equipment, materials and vehicles arriving from outside of the island of Maui would be washed and/or visually inspected (as appropriate) for excessive debris, plant materials, and invasive or harmful non-native species before transportation to the Project site; import of materials that are known or likely to contain seeds or propagules of invasive species would be prohibited. In addition, offsite sources of revegetation materials (such as seed mixes, gravel, and mulches) would be certified as weed-free or inspected before transport to the Project site.

During the operational phase of the Project, little to no ground disturbance is anticipated. Vegetation within the Project site would be routinely managed through grazing and/or mechanical means; a minimal amount of herbicide may be used in spot locations. Decommissioning of the Project, at the end of its useful life, would involve removal of the Project facilities and returning the site to its existing condition (or similar), including revegetation with a suitable mix of species as needed.

### 6.3.3.2 Wildlife

A total of 21 bird species were observed within the Project study area during the biological surveys. Most of these bird species are non-native to the Hawaiian Islands, and are species commonly found in rural or agricultural areas. The most common bird species recorded during the survey were African silverbill (*Euodice cantans*), scaly-breasted munia (*Lonchura punctulata*), and zebra dove (*Geopelia striata*). Two native bird species were observed in small numbers—the black-crowned night heron/‘auku‘u (*Nycticorax nycticorax*) and the federally-threatened and state-endangered Hawaiian

goose/nēnē. It is likely that the migrant Pacific golden-plover/kolea (*Pluvialis fulva*) or other migratory birds could also occasionally transit or occur within this area. Additional information regarding nēnē and other listed wildlife species that could potentially occur within the Project study area is provided in Section 6.3.3.3.

Four non-native terrestrial mammal species were detected in the Project study area during the biological surveys. Large herds of axis deer (*Axis axis*) were seen on several occasions. Feral pigs (*Sus scrofa*) and small Indian mongooses (*Herpestes auropunctatus*) were also seen, and evidence of the presence of cats (*Felis catus*) was observed. Although not directly observed, other introduced mammals, such as feral dogs (*Canis familiaris*), house mice (*Mus musculus*), and rats (*Rattus* spp.) are also likely to occur. Large and conspicuous invertebrates observed during the biological surveys include a variety of non-native species, as well as two indigenous dragonflies—globe skimmer (*Pantala flavescens*) and green darner (*Anax junis*). As further discussed below, the endangered Blackburn's sphinx moth has also been observed within the Project study area.

Direct impacts to wildlife as a result of Project implementation could occur as a result of collision with vehicles and equipment, including the solar photovoltaic modules and overhead lines. However, based on avian mortality data from various sources in the continental U.S., avian mortality rates at utility-scale solar projects are estimated to be considerably lower than that associated with other types of energy projects (wind facilities, fossil fuel power plants), roads, and buildings (Walston et al. 2016). Indirect impacts to wildlife may include temporary disturbance and/or habitat alteration or loss. Temporary disturbance of wildlife within the Project site would occur throughout the construction period due to increased activity and noise levels, including the use of construction vehicles and equipment. Following construction, activity and noise levels within the Project site would generally be limited to occasional facility maintenance and agricultural activities. It is expected that wildlife would exhibit avoidance behavior and relocate to avoid Project-related activity and noise, both during the construction and operational phases of the Project, as needed. In addition to temporary displacement, the Project would also result in some habitat alteration or loss. However, the affected habitat is highly disturbed and predominantly comprised of non-native species. Furthermore, a substantial amount of habitat would remain intact, both within the Project site and in the remaining parcel area and surrounding vicinity. It is expected that wildlife species would readily occupy the remaining habitat, such that temporary displacement or habitat loss would not be expected to measurably affect the size or stability of any wildlife populations. Implementation of avoidance and minimization measures, as listed in Section 6.3.3.4, would further reduce the potential for adverse impact to wildlife species as a result of the Project.

At some solar facilities in the continental U.S., water dependent birds (e.g., grebes, loons, rails, coots, shorebirds, and waterfowl) have been documented to collide with photovoltaic arrays (Kosciuch et al. 2020). It has been hypothesized that some water dependent birds may perceive the panel arrays as waterbodies and collide with the panels while attempting a water landing (Kagan et al. 2014, WEST 2014, Walston et al. 2016). This hypothesis has been termed the "lake effect." However, no studies have investigated or found a causal link for the source of water dependent bird mortalities observed in the

continental U.S. A recent study that examined the occurrence of live water dependent birds at solar facilities in California concluded that potential attraction by water dependent birds to photovoltaic arrays (i.e. “lake effect”) is likely a nuanced process dependent on multiple environmental factors and may be species- and context-specific (Kosciuch et al. 2021). Water dependent bird activity and abundance varies regionally and may result in variation in avian mortality risk across different landscapes. In Hawai‘i, there have been no reports to date supporting the “lake effect” hypothesis at operating solar facilities, or any information to indicate listed birds are colliding with or attracted to photovoltaic arrays.

### 6.3.3.3 Threatened and Endangered Species

The federal Endangered Species Act (ESA) and its implementing regulations provide protection for species listed as threatened or endangered and their habitats. The ESA defines an endangered species as one that is “in danger of extinction throughout all or a significant portion of its range” and a threatened species as one that “is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (16 U.S. Code [U.S.C.] § 1532). The ESA prohibits the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. Endangered and threatened species are also protected under state law, pursuant to HRS Chapter 195D. HRS Chapter 195D-4 specifies that any species listed as endangered or threatened under the ESA shall also be listed as such under state law; other species may also be state listed as endangered or threatened based on habitat impacts, overutilization, disease or predation, or other specified factors. The ESA and HRS Chapter 195D are administered by USFWS and DOFAW, respectively.

No portion of the Project site or the surrounding land has been designated as critical habitat by the USFWS.<sup>46</sup> As noted above, the listed Hawaiian goose/nēnē and Blackburn’s sphinx moth were observed during the biological surveys. Although not observed, several other federally or state listed wildlife species also have the potential to occur within or traverse over this area. Each of these listed species is described below.

#### **Nēnē**

The Hawaiian goose, or nēnē, use a variety of habitat types, including beach strand, shrubland, grasslands to lava rock (Banko, 1988; Banko et al., 1999). They are also known to use landscaped/maintained areas, such as golf courses, grazed agricultural areas, playing fields, and housing developments. Although they are not obligate waterbirds, nēnē also use surface waters, such as wetlands, reservoirs, and streams (USFWS 2021). Nēnē were observed flying over the Project study area on several occasions, and groups of nēnē were also seen in two nearby water reservoirs. Nēnē have also been observed at the Keālia Pond National Wildlife Refuge south of the Project site (USFWS 2011a, iNaturalist 2023a).

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<sup>46</sup> Critical habitat includes areas containing essential habitat features for threatened or endangered species, regardless of whether those areas are currently occupied by the species (16 U.S.C. § 1532).

Although their preferred habitat is not present within the Project site, nēnē may fly through the Project site to adjacent suitable habitat. Nēnē also have the potential to be attracted to the Project site during or after construction if foraging habitat is created (i.e., mowed lawns). Should nēnē occur within the Project site, potential impacts could include collision with vehicles and other Project-related equipment. Consistent with recommendations provided by USFWS and DOFAW, avoidance and minimization measures would be implemented such that impacts to nēnē are not anticipated. As listed in Section 6.3.3.4, these measures would include reduced speed limits, work restrictions if nēnē are found, and nest surveys if nēnē are observed loafing or foraging within the Project site during the breeding season.

### **Blackburn's Sphinx Moth**

No Blackburn's sphinx moth eggs or caterpillars were observed during the biological resource surveys in July 2023, September 2023, May 2024, or July 2024. However, two Blackburn's sphinx moth eggs and three Blackburn's sphinx moth caterpillars were observed on tree tobacco plants during systematic surveys in November 2023. The non-native tree tobacco, which is a larval host plant for the endangered Blackburn's sphinx moth, was observed scattered throughout the Project study area. This host plant is invasive and widespread across the Hawaiian Islands and is not considered a primary constituent element for Blackburn's sphinx moth because it is short-lived, vulnerable to prolonged drought, and the plant's water content may not be suitable for optimal larvae growth (USFWS 2003). The species' two native larval host plants (*Nothoestrum latifolium* and *N. breviflorum*), which are considered primary constituent elements required by Blackburn's sphinx moth larvae for foraging, sheltering, maturation, and dispersal (USFWS 2003) were not found and are not likely to occur in the Project study area. In addition, none of the native adult stage host plants used by the Blackburn's sphinx moth (e.g., *Capparis sandwichiana*, *Plumbago zeylanica*, *Ipomoea indica*, *Pleomele auwahiensis*) were observed in the Project study area.

Following the initial biological resources survey and subsequent discussions with USFWS and DOFAW, tree tobacco was inspected for evidence of Blackburn's sphinx moth and removed within the Project study area based on impact avoidance and minimization measures recommended by the agencies. Using a grid system, Tetra Tech biologists inspected tree tobacco for the presence of Blackburn's sphinx moth and appropriate tree tobacco removal procedures were subsequently implemented. The inspection and removal efforts were closely coordinated to ensure that (1) tree tobacco plants with evidence of Blackburn's sphinx moth were left undisturbed; (2) tree tobacco plants with no evidence of Blackburn's sphinx moth were removed on the same day as inspection; and (3) no ground disturbance occurred within 33 feet of tree tobacco plants greater than 3 feet in height for the recommended duration following inspection and removal. Tree tobacco inspection and removal was conducted in September 2023, with periodic inspection and removal efforts continuing since that time on an ongoing basis. As these measures eliminate potential habitat for the Blackburn's sphinx moth, this species is not expected to be directly impacted by construction and operation of the Project.

### **Hawaiian Hoary Bat**

The Hawaiian hoary bat, 'ōpe'ape'a, may transit, roost, or forage in portions of the Project site. Hawaiian hoary bats typically roost in woody vegetation over 15 feet tall in a wide variety of native and

introduced trees and forage in open and semi-cluttered landscapes across a wide range of habitats and vegetation types (Bonaccorso et al. 2015).

The biological survey for the Project did not include focused surveys for the Hawaiian hoary bat (e.g., acoustic bat detectors or night vision goggles). As USFWS and DOFAW recognize all woody vegetation greater than 15 feet tall as potential bat roosting habitat (DOFAW 2015; USFWS 2023b), Tetra Tech noted the presence of any such trees or shrubs which could be used for roosting. Although the vegetation within the Project site is predominately grassland, the scattered kiawe trees throughout the Project site and along Pale‘a‘ahu Gulch may provide potentially suitable roosting habitat. Given the wide range of foraging habitat for this species, it is also possible that bats could forage in or near the Project site.

If trees or shrubs suitable for bat roosting (i.e., those greater than 15 feet in height) are cleared during the Hawaiian hoary bat birthing and pupping season, there is a risk that juvenile bats that cannot yet fly on their own could inadvertently be harmed or killed. However, no direct impacts would occur to roosting bats or their young because no tree trimming or disturbance would occur during the birthing and pupping season (June 1 through September 15), per the measures described in Section 6.3.3.4. While noise during construction could temporarily displace roosting bats from the Project site, non-reproductive bats generally use multiple roosts within an area and are expected to relocate if disturbed (Montoya-Aiona et al. 2023). The Project would permanently remove some roosting habitat; however, similar suitable roosting habitat is available in the vicinity so long-term effects on the Hawaiian hoary bat would be minor.

#### **Listed Seabirds**

Federally and state listed seabird species that occur in Hawai‘i include the Hawaiian petrel/ ‘ua‘u, band-rumped storm petrel/ ‘ake‘ake, and Newell’s shearwater/ ‘a‘o. These species spend most of their time at sea, returning to land only during the breeding season. Hawaiian seabirds have not been documented in the Project site and suitable nesting habitat does not exist in or near the Project site. However, suitable nesting habitat exists in upper elevations of Maui, suggesting the potential for these birds to fly over the area at night between March and December while transiting between nest sites and the ocean.

Seabirds are attracted to lights, which can cause disorientation. Fledging seabirds are especially affected by artificial lighting and can become exhausted from circling the light sources, resulting in collision with nearby structures or grounding. Once grounded, the birds are vulnerable to predation by small mammals (e.g., cats and mongoose) and vehicle strikes (Rodríguez et al. 2017). Measures to avoid and minimize potential impacts from artificial night lights would be implemented as part of the Project, as described in Section 6.3.3.4.

#### **Listed Waterbirds**

No suitable habitat for listed waterbirds (Hawaiian stilt/ ae‘o and Hawaiian coot/ ‘alae ke‘oke‘o) occurs in the Project site, and none of these species were observed during the biological survey. However, Hawaiian stilt and Hawaiian coot are known south of the Project site in the Keālia Pond National Wildlife Refuge (USFWS 2011a, iNaturalist 2023b, iNaturalist 2023c) and stilts were previously recorded to the north (Tetra Tech 2021).

Hawaiian stilts favor open wetland habitats, shallow ponds, and mud flats with minimal vegetative cover and water depths of less than 9 inches (23 centimeters [cm]) (Robinson et al. 2020). They use human-made features such as reservoirs, settling and containment basins, impoundments, and sewage treatment ponds. Nesting occurs almost exclusively on human-maintained wetlands (Robinson et al. 2020; USFWS 2011b). Hawaiian coots can be found in both freshwater and brackish wetlands, in coastal plains, canefield reservoirs, human-made impoundments, and on golf courses (DOFAW 2015, Pratt and Brisbin 2020). Nests are constructed of floating mats of aquatic vegetation or semi-floating vegetation, and generally occur in water about 13.4 inches (34 cm) deep (Pratt and Brisbin 2020). Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur.

Areas that provide sub-optimal habitat for listed Hawaiian waterbirds can increase the potential for predation and reduced reproductive success, thus creating an attractive nuisance. As the Project would not create any new habitat for listed waterbirds, it is not expected to result in any such impacts. Furthermore, avoidance and minimization measures recommended by USFWS and DOFAW would be implemented, such that the Project is not expected to impact the Hawaiian stilt or Hawaiian coot.

#### 6.3.3.4 Avoidance and Minimization Measures

Consistent with recommendations provided by USFWS and DOFAW, the measures listed below would be implemented to avoid and minimize potential project-related impacts. With implementation of these measures, the Project would not be expected to result in significant adverse impacts to wildlife, including federally and state-listed species.

- An environmental education and observation program would be implemented for all construction and operations staff. Staff would be trained to identify listed species that may be found on-site and to take appropriate steps if listed wildlife are found.
- If downed listed species are observed at the Project, USFWS and DOFAW would be notified.
- Speed limits would be established and enforced within the Project site and along the access roads.
- Staff would be trained to not approach, feed, or disturb nēnē.
- If nēnē are found in the Project site during active construction, all activities within 100 feet (30 m) of the bird would cease and would not resume until the bird leaves the area of its own accord.
- If nēnē are observed loafing or foraging within the Project site during the breeding season (September through April), a biologist familiar with nesting behavior would survey for nests in the area prior to the resumption of work. If a nest is discovered, all work within 150 feet (46 m) would cease and USFWS and DOFAW would be contacted. If a nest is not discovered, work would continue after the bird leaves the area of its own accord.
- Prior to any vegetation clearing or ground disturbing activities involving heavy equipment or machinery, a qualified biologist would survey for Blackburn's sphinx moth and its larval host plant tree tobacco. Surveys would include searches for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). Based on the survey results, the following steps would be taken:

- Any tree tobacco less than 3 feet tall would be removed.
  - Prior to removing tree tobacco more than 3 feet in height, the plant would be thoroughly inspected for the presence of Blackburn's sphinx moth eggs and larvae. If moths, eggs, or larvae are found, the plant would be mapped, left undisturbed, and re-inspected at a future date. Once it has been confirmed that no moths, eggs, or larvae are present, the above-ground portion of the plant would be cut off and removed; the stem would be treated with herbicide or re-trimmed to prevent leaf growth and ground disturbance would be restricted within a 10-meter (33-foot) buffer around the plant's location. The buffer would be kept in place for three months or until a heavy rainfall occurs. After this period, the plant roots and soil may be disturbed.
  - Monitoring would be conducted approximately every 4-6 weeks and tree tobacco would be removed before reaching 3 feet in height for the duration of ground-disturbing activities, as appropriate.
- No trees or shrubs greater than 15 feet tall would be disturbed, trimmed or removed during the Hawaiian hoary bat birthing and pupping season (June 1 through September 15).
  - Any fences that are erected as part of the Project would not have barbed wire to prevent entanglements of the Hawaiian hoary bat, unless required for safety and security purposes (e.g., surrounding the electrical substation or switchyard).
  - Operational on-site lighting would consist of fixtures that are shielded and/or directed downward to prevent upward radiation, triggered by a motion detector, and fitted with nonwhite light bulbs to the extent possible. Lighting would be situated so that light does not shine on and reflect off the solar panels.
  - Construction activities would be restricted to daylight hours during the seabird peak fallout period (September 15–December 15) to avoid the use of nighttime lighting that could attract seabirds.
  - The Project would incorporate Avian Power Line Interaction Committee (APLIC) guidelines (APLIC 2006; 2012) as appropriate. Construction of overhead lines would be minimized to the extent possible.
  - If a grounded seabird is found, the Maui Nui Seabird Recovery Project would be contacted.
  - The Project would avoid creating areas with standing water to avoid attracting waterbirds. Stormwater retention features would be designed to drain within 48 hours of the end of a storm event and would be kept free of emergent vegetation.
  - If a listed waterbird is found in the Project site during active construction, all activities within 100 feet of the bird would cease and the bird would not be approached.
  - No suitable waterbird nesting habitat is present in the Project site; however, if suitable nesting habitat is created by the Project, a qualified biologist would conduct Hawaiian waterbird nest surveys. Surveys would be conducted before work begins and repeated after any subsequent delay in work of 3 or more days (during which birds may attempt nesting). If a nest of a listed

waterbird is not discovered, work would continue after the listed waterbird leaves the area of its own accord. If a nest of a listed waterbird is discovered, USFWS and DOFAW would be contacted, and a 100-foot buffer would be maintained around all active nests and/or broods until the chicks/ducklings have fledged.

### 6.3.4 Dune Ecosystems

The Project would not affect any dune ecosystems.

### 6.3.5 Stream Ecosystems

As described in Section 6.3.1.1, no perennial or intermittent streams occur within the Project site. The nearest perennial stream is Waikapū Stream, from which the Project has been set back by a minimum of 650 feet. One of the existing plantation roads that would be used to access the Project site (Cane Haul Road) crosses Waikapū Stream via an at-grade concrete ford; the Project would not involve any improvements or upgrades to this crossing, nor would any other form of ground disturbance occur within the limits of the stream. Ephemeral gulches that occur onsite—Pale‘ā‘ahu Gulch and Pōhākea Gulch—are described in Section 6.3.1.1. As previously detailed, LID design techniques and stormwater retention measures have been incorporated into the Project and BMPs would be implemented to prevent and minimize discharge of pollutants to downstream waters, including Waikapū Stream. As such, the Project would not be expected to impact any stream ecosystems.

### 6.3.6 Marine Ecosystems

The Project would not affect any marine ecosystems.

### 6.3.7 Natural Features

As previously described, the Project site was formerly part of the HC&S sugarcane plantation which was continuously cultivated for a period of more than 100 years until commercial operations ceased in 2016. The site now comprises fallow agricultural fields; the only natural features within the Project site are two ephemeral gulches (Pōhākea Gulch and Pale‘ā‘ahu Gulch) which extend south toward Keālia Pond (Figure 17). As previously described, the Project layout incorporates a 200-foot buffer along these gulches; no Project components, with the exception of a limited portion of the interconnection lines, would be located within the buffer. As discussed in Section 3.2, the Project has been sited to avoid Waikapū Stream, located approximately 650 feet to the east. Additional information regarding these features is provided in Section 6.3.1.1.

### 6.3.8 Open Space

As described in Section 10.2.1.3, the Kīhei-Mākena Community Plan land use map identifies the area along the southern boundary of the Project site as Open Space (see Figure 11; County of Maui 1998). This designation is intended to “limit development on certain urban and non-urban designated lands which may be inappropriate for intensive development due to environmental, physical, or scenic constraints; this category would include but not be limited to shoreline buffer areas, landscape buffers, drainageways, view planes, flood plains, and tsunami areas. Other appropriate urban and non-urban

uses may be allowed on a permit basis.” None of the solar photovoltaic, energy storage, or substation/switchyard components would be located in the area designated as Open Space. The proposed interconnection lines would be located along the edge of this area, as needed to interconnect with Maui Electric’s existing grid, but would not involve inappropriate development of Open Space lands. Furthermore, as discussed in Section 10.2.1.4, the draft version of the updated community plan (Draft South Maui Community Plan) no longer designates this area as Open Space; however, the areas within 100 feet of the onsite gulches are newly-designated as Open Space (County of Maui 2025b). As previously described, the Project incorporates a 200-foot buffer along these gulches such that no Project facilities (other than a limited portion of the interconnection lines) would be located within this area. The Project site does not include any other designated open space areas.

### 6.3.9 Noise

The degree of audibility of a new or modified sound source is largely dependent upon the relative level of the existing acoustic environment. The assessment of the acoustic environment considers all areas that could be potentially affected by construction or operational noise resulting from the Project and includes a wide range of noise settings. In general, ambient noise levels at the Project site reflect the existing land uses throughout the region. Noise in this vicinity is predominantly associated with ongoing agricultural, industrial, and commercial activities, as well as vehicles travelling along the adjacent highways. Noise sensitive receptors in the vicinity of the Project site include Keālia Pond National Wildlife Refuge (approximately 0.3 miles to the south), condominium units along Hauoli Street in Mā’alaea and North Kīhei Road (approximately 0.8 miles to the southwest and 2.0 miles to the southeast, respectively), as well as residences in Waikapū and Kahului (approximately 2.0 and 2.3 miles to the north, respectively; see Figure 19).

The State of Hawai’i has adopted statewide noise standards, set forth in HAR Section 11-46 (“Community Noise Control”); these are administered by State of Hawai’i Department of Health (DOH). The stated purpose of the standards is to “provide for the prevention, control, and abatement of noise pollution in the State from the following noise sources: stationary noise sources (such as air-conditioning units, exhaust systems, generators, compressors, and pumps); and equipment related to agricultural, construction, and industrial activities.” Sound from ongoing maintenance activities is considered part of routine operation and the combined total of ongoing maintenance and routine operation are subject to the sound level limits. Sound from construction and the occasional, major equipment overhauls during operations and maintenance is regulated as construction activity. The noise standards are the maximum permissible sound levels, as measured from the property line, and vary according to underlying zoning district. The daytime and nighttime maximum permissible sound levels for the three classes of receiving zoning districts, provided in A-weighted decibels (dBA), are summarized in Table 6. For mixed zoning districts, the primary zoning designation is used to determine the applicable zoning district class.

**Table 6. Maximum Permissible Sound Levels by Zoning District**

Receiving Zoning District	Maximum Permissible Sound Level (dBA)	
	Daytime (7:00am – 10:00pm)	Nighttime (10:00pm – 7:00am)
Class A: All areas equivalent to land zoned residential, conservation, preservation, public space, or similar type	55	45
Class B: All areas equivalent to lands zoned for multi-family dwellings, apartment, business, commercial, hotel, resort, or similar type	60	50
Class C: All areas equivalent to lands zoned agriculture, county, industrial, or similar type	70	70
Source: HAR §11-46, "Community Noise Control."		

As shown in Figure 13, the land within and surrounding the parcel is primarily within the county’s agricultural zoning district, and thus falls within the Class C Receiving Zoning District. Sound levels received in this district cannot exceed 70 dBA at the property limits. Areas to the south are zoned as open zone and open space, both of which are assumed to be within the Class A Receiving Zoning District. Sound levels associated with this zoning district cannot exceed 55 dBA during the day or 45 dBA at night at the property limits.

The noise standards are assumed to be absolute and independent of the existing acoustic environment; therefore, no baseline sound survey is required to assess conformity. Pursuant to HAR Section 11-46-7, a permit may be obtained for operation of an excessive noise source (e.g., construction equipment) beyond the maximum permissible sound levels. Factors that are considered in granting of such permits include whether the activity is in the public interest and whether the best available noise control technology has been incorporated into the activity.

**Construction Noise**

As discussed in Section 2.3, Project-related construction activities are expected to include transport and delivery of Project equipment and materials, site preparation, equipment installation, and revegetation and landscaping. Noise levels resulting from construction activities vary greatly depending on the type of equipment, the specific equipment model, the operations being performed, and the overall condition of the equipment. Table 7 summarizes the types of construction equipment that are expected to be used onsite and associated construction sound source information referenced from the U.S. Environmental Protection Agency (USEPA) and the Federal Highway Administration (FHWA) Construction Noise Handbook (FHWA 2006).

**Table 7. Summary of Anticipated Construction-Related Noise**

Construction Equipment	Load Factor %	Maximum L <sub>max</sub> Equipment Noise Level at 50 feet dBA	Composite L <sub>eq</sub> Noise Level at 100 feet Average Daytime dBA	Composite L <sub>eq</sub> Noise Level at 500 feet Average Daytime dBA	Composite L <sub>eq</sub> Noise Level at 1,000 feet Average Daytime dBA	Composite L <sub>eq</sub> Noise Level at 2,000 feet Average Daytime dBA
(4) Pile Driver	20	95				
(2) Crane	16	85				
(2) Excavator	40	85				
(2) Bulldozer	40	85				
(2) Grader	40	85				
(2) Screener	40	85	91	77	71	65
(4) Dump Truck	40	84				
(4) Water Truck	50	85				
(6) Forklift	40	80				
(1) Concrete Truck	40	88				

In addition to the construction-related noise levels at various reference distances, as listed in Table 7, construction noise levels were also evaluated at the nearest Class A Receiving Zoning District boundary, which is located approximately 540 feet south of the Project site. At this boundary, the predicted construction noise would be approximately 77 dBA.<sup>47</sup> Predicted construction noise levels at other potential noise sensitive receptors include approximately 59 dBA at the Keālia Coastal Boardwalk, approximately 58 dBA at the condominium units along Hauoli Street in Mā‘alaea, and approximately 50 dBA at the condominium units to the southeast along North Kīhei Road.

As the received sound levels could exceed the 55 dBA daytime noise limit for potential noise sensitive receptors in the Class A Receiving Zoning District, a permit may be needed in accordance with HAR Section 11-46-7(j). Under HAR Section 11-46-7(j), noise permits for construction allow for activities emitting noise in excess of the limits but restrict these activities to the hours between 7:00 am and 6:00 pm during weekdays and 9:00 am to 6:00 pm on Saturdays (no exceedances allowed on Sundays or holidays). Construction-related traffic, such as trucks traveling to and from the Project site on public roads, would also generate noise and contribute to overall sound levels; however, traffic-related noise generated by the Project would be short-term and comparable to existing noise levels along the local road network and Kūihelani Highway.

Overall, construction of the Project would generate noise that exceeds the ambient levels and has the potential to cause a temporary and short-term disturbance. Reasonable efforts would be made to

<sup>47</sup> Construction sound would attenuate with increased distance from the source. Although not considered in the analysis, other factors including vegetation, terrain and obstacles such as buildings would act to further limit the impact of construction noise levels. Actual received sound levels would fluctuate, depending on the construction activity, equipment type, and separation distances between source and receiver. The variation in power and usage imposes additional complexity in characterizing construction noise levels. The analysis conservatively assumes all phased construction equipment operating simultaneously; however, equipment would not generally be operated continuously.

minimize the noise levels associated with Project construction to the extent practicable, including measures such as those listed below.

- Construction activities would not occur between 6:00 pm and 7:00 am on weekdays or Saturday, or at any time on Sunday.
- Construction site and access road speed limits would be established and enforced during the construction period.
- Electrically-powered equipment would be used instead of pneumatic or internal combustion powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas would be located as far as practicable from noise-sensitive receptors.
- The use of noise-producing signals, including horns, whistles, alarms, and bells would be for safety warning purposes only.
- No Project-related public address or music system would be audible at any adjacent receptor.
- All noise-producing construction equipment and vehicles using internal combustion engines would be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) would be equipped with shrouds and noise control features that are readily available for that type of equipment.

### **Operational Noise**

Operational sound emissions associated with the Project were analyzed using the CadnaA computer noise model and resultant sound levels were calculated for nearby noise sensitive receptors. CadnaA is an industry standard model developed by DataKustik GmbH to provide estimated sound levels at distances from sound sources of all types, including complex facilities consisting of various types of equipment such as that proposed for this Project. CadnaA’s propagation equations are based on the International Organization for Standardization (ISO) standard ISO 9613 “Acoustics – Attenuations of sound during propagation outdoors” which is a common approach to assessing noise attenuation from known industrial noise sources outdoors. The engineering methods specified in this standard consist of full octave band sound frequency algorithms with adjustments to account for site specific ground, topography, and propagation under a standardized meteorological condition.

The Project layout was imported into the acoustic model, which allows onsite equipment to be identified, buildings and structures to be added, and sound emission data to be assigned to sources as appropriate. The primary noise sources associated with Project operations would be the inverters and integrated step-up transformers, battery units, and substation transformers. Although electronic noise from inverters can be audible, it is often reduced by a combination of shielding, noise cancellation, filtering, and noise suppression. As described in Section 3.3, the Project would include approximately 24

power conversion stations, each including one inverter consisting of five modules, a pad-mounted transformer, and one battery unit with two chillers.

The substation would have switching, protection, and control equipment, as well as two 40 megavolt-amp (MVA) transformers, which generate sound that is generally described as a low humming. There are three main sound sources associated with a transformer: core noise, load noise, and noise generated by the operation of the cooling equipment. The core is the principal noise source and does not vary significantly with electrical load. The load noise is primarily caused by the load current in the transformer’s conducting coils (or windings) and consequently the main frequency of this sound is twice the supply frequency: 120 hertz (Hz) for 60 Hz transformers. The cooling equipment (fans and pumps) may also be an important noise component, depending on fan design. During air-forced cooling, fan noise is produced in addition to the core noise. The resulting audible sound is a combination of the humming and broadband fan noise. Breaker noise is a sound event of very short duration, expected to occur only a few times throughout the year. Just as horsepower ratings designate the power capacity of an electric motor, a transformer’s megavolt amperes rating indicates its maximum power output capacity.

Reference sound power levels input to CadnaA were provided by equipment manufacturers, based on information contained in reference documents or developed using empirical methods. The source levels used in the predictive modeling are based on estimated sound power levels that are generally deemed to be conservative. Table 8 summarizes the equipment sound power level data used as inputs to the acoustic modeling analysis.

**Table 8. Modeled Octave Band Sound Power Level for Project Equipment**

Sound Source	Sound Power Level (L <sub>w</sub> ) by Octave Band Frequency dBL									Broadband Level
	31.5	63	125	250	500	1k	2k	4k	8k	dBA
Inverter	85	83	85	84	88	79	78	86	79	90
Pad-mounted Transformer	87	93	95	90	90	84	79	74	67	90
Battery Unit	111	96	103	97	90	84	77	70	65	93
GSU Transformer	92	98	100	95	95	89	84	79	72	95

Broadband (dBA) sound pressure levels were calculated for expected normal Project operation assuming that all components are operating continuously and concurrently at the representative manufacturer-rated sound power level. For the purpose of the analysis, it was assumed that all equipment would operate consistently during the daytime, while only the substation transformers and battery units would operate at nighttime. After calculation, the sound energy was then summed to determine the equivalent continuous A-weighted downwind sound pressure level at a point of reception. Figure 25 provides a sound contour plot displaying broadband (dBA) sound levels presented as color-coded isopleths for Project operations. The sound contours are a graphical representation of the cumulative noise associated with operation of the equipment and show how operational noise would be distributed over the areas surrounding the Project. The contour lines shown are analogous to elevation contours on a topographic map (i.e., the sound contours are continuous lines of equal noise level around a source, or

sources, of sound). The results show that received sound levels at the nearest Class A Receiving Zoning District and all surrounding properties would be well below the noise limits prescribed by HAR Section 11-46. Overall, sound emissions associated with the Project are expected to remain at a low level, consistent with other solar energy facilities of similar size and design, and would not significantly impact any surrounding properties.

### 6.3.10 Air Quality

Construction of the Project would result in short-term impacts to air quality, primarily as a result of vehicle exhaust emissions and fugitive dust particles from disturbed soils. Vehicle exhaust emissions would be generated by heavy construction equipment operating within the Project site, trucks delivering construction materials and Project components to the site, and vehicles used by construction workers commuting to and from the Project site. These activities would result in emissions of air pollutants including carbon dioxide (CO<sub>2</sub>), nitrogen oxides, sulfur oxides, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). In comparison to overall emissions in the region, these contributions would be relatively small and would not be expected to affect attainment of the federal or state ambient air quality standards.

State law (HAR Section 11-60.1, Air Pollution Control) requires that the best practical operation or treatment be implemented during construction activities such that there is not discharge of visible fugitive dust beyond the property lot line. To comply with these requirements and to minimize any other adverse effects on air quality, the BMPs listed below would be implemented.

- All construction vehicles and equipment would be properly maintained according to manufacturer's specifications.
- To the extent feasible, off-road and portable diesel-powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, would be fueled with motor vehicle diesel fuel.
- The number of vehicles accessing and moving within the Project site would be limited to the extent possible. Vehicle speed on unpaved roads within the Project site would be limited to 25 miles per hour or less.
- Vehicles and equipment would not be allowed to idle for extended periods of time (i.e., more than 20 minutes).
- All trucks hauling soil or other loose materials would be covered.
- Water trucks or sprinkler systems (with no chemical additives) would be used to control fugitive dust within the Project site.
- Carpooling among construction workers would be encouraged to minimize construction-related traffic and associated emissions.

As previously described, areas that have been temporarily disturbed would be revegetated (with natural regrowth and/or hydroseeding) as needed, and the vegetation would be actively monitored and

maintained at levels necessary to minimize the potential for erosion and fugitive dust. Operation of the Project would result in minor emissions associated with vehicle exhaust and fugitive dust from vehicles and equipment used to perform operation and maintenance activities, as well as those associated with compatible agricultural activities. None of the equipment associated with the solar arrays, battery units and ancillary facilities (e.g., inverters and control equipment, transformers, switches, etc.) emit air pollutants of any kind. Consequently, it is anticipated that emissions associated with Project operations and maintenance would be very low. At a broader scale, the Project would provide a net air quality benefit by replacing energy generated by burning fossil fuels with renewable energy, thereby reducing emissions of greenhouse gases.

## 6.4 Other Resources

### 6.4.1 Agricultural Resources

*This section addresses the information requirements related to impacts on agricultural use as specified in Section IIIH(3) of MAPPS for a CSUP/SSP.*

#### 6.4.1.1 Agricultural Designations

##### **Agricultural Lands of Importance to the State of Hawai'i (ALISH)**

The State Department of Agriculture developed and compiled the Agricultural Lands of Importance to the State of Hawai'i (ALISH) Classification System in 1977 in cooperation with the NRCS. The ALISH system identifies and classifies agriculturally suitable land based on a wide range of factors including soil characteristics, climate, moisture supply, and other general production-related factors (NRCS 2008). The three classification ratings are listed below; unclassified lands are not considered important for agriculture.

- **Prime Lands:** Land which has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed according to modern farming methods.
- **Unique Lands:** Land that has a special combination of soil quality, location, growing season, moisture supply, and is used to produce sustained high quality yields of a specific crop when treated and managed according to modern farming methods.
- **Other Lands:** Land other than Prime or Unique Agricultural Land that is also of statewide or local importance to agricultural use.

As shown in Figure 26, the Project site comprises approximately half Prime Lands and half Other Lands.

##### **Important Agricultural Lands (IAL)**

HRS Chapter 205 (Part III) establishes the basis for designation of IAL as a means to conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands. HRS Chapter 205-42 defines IALs as those lands that "(1) are capable of producing sustained high agricultural yields when treated and managed according to accepted farming methods and technology; (2) contribute to the State's economic base and produce

agricultural commodities for export or local consumption; or (3) are needed to promote the expansion of agricultural activities and income for the future, even if currently not in production.” In 2009, while still actively operating the HC&S sugarcane plantation, A&B obtained approval from the LUC to designate approximately 27,102 acres of land in Wailuku and Makawao as IAL. The vast majority of these lands are highly rated for agricultural productivity; however, the IAL designation also includes additional lands that help to provide a “contiguous” land mass for agricultural operating productivity (LUC 2009). The Project site is located on the western periphery of the area designated as IAL and overlaps with approximately 441 acres (approximately 1.6 percent) of the 27,102-acre designated area (Figure 27); all of the Project components (excluding the substation and switchyard) would fall within the IAL boundary (see Sheet 10; Appendix D). As further discussed below, the proposed Project and its compatible agricultural activities are a permitted use and would be consistent with the objectives for IAL.

#### 6.4.1.2 Agricultural Use and Productivity

The Project site comprises 476.303 acres, all of which falls within the state agricultural land use district and county agricultural zoning district. As a solar energy facility, the Project is a permitted use in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP and a SUP. Additional detail regarding compliance with the provisions of HRS Chapter 205 and the county’s Zoning Ordinance is provided in Section 10.

As described above, the Project site is part of the 27,102-acre area designated as IAL in 2009. Nearly 60 percent of these IAL-designated lands are classified as LSB Class A soils, which are considered to be those areas with the highest productivity; approximately 14 percent are designated as Class B and the remaining 28 percent are LSB Class C, D, E or unclassified soils. Based on the documentation submitted in support of the IAL designation, the Project site is located on the western periphery of the designated lands, which has lower soil classification ratings (LSB Class B and E) as compared to the central core, which consists of nearly contiguous LSB Class A soils (Figure 16; LUC 2009). Likewise, the vast majority of the IAL-designated area comprises contiguous Prime Agricultural Land, whereas the Project site and other peripheral areas include a mosaic of Other Lands (Figure 26; LUC 2009). Based on these ratings, although still reasonably productive, the land within the Project site has some of the lowest agricultural productivity ratings of the overall 27,102-acre IAL designated area. Regardless, these lands are understood to provide value as part of the contiguous area that contributes to maintaining a critical land mass important to agricultural operating productivity (LUC 2009).

The land within the Project site is not currently used for agricultural purposes (crop or livestock) and has been fallow and unused since HC&S ceased sugarcane plantation operations in 2016. As such, the Project would not displace any existing agricultural uses. The Project site would occupy only about one percent of Mahi Pono’s overall land holdings (or two percent, when considered together with the existing Kūihelani Solar + Storage Project). The remainder of Mahi Pono’s 41,000-acre land holdings are (or are planned to be) used for agricultural purposes; to date, approximately 22,000 acres are actively being used for grass pasture for cattle, or diversified crops consisting primarily of citrus, macadamia nut, coffee, and various row crops (Mahi Pono 2025). Given the extent and configuration of diversified

agriculture on Mahi Pono’s property, the Project would not substantially limit agricultural productivity, nor would it impair agricultural activities on surrounding lands as the solar and storage facilities are a passive operation. Rather, the Project would support Mahi Pono’s overall diversified agricultural operation by providing a valuable source of revenue.

In addition, the Project presents an opportunity to return agricultural production to this site with a commitment to compatible agricultural activities for the duration of operations. Within the Project site, the Project facilities would physically occupy only a fraction of the land (see Table 1), leaving ample open space between and surrounding the Project facilities. As described in Section 3.4, AES would make the land within the Project site available at no cost and would dedicate substantial resources to a local agricultural partner for implementation of compatible agricultural activities. Based on an executed LOI (Appendix G), AES plans to partner with LPP to expand their sheep production and grazing operation and establish a beekeeping operation within the Project site. LPP’s sheep production operation would be expected to yield agricultural outputs including dairy, meat, and wool products, as well as a sustainable form of vegetation management and fire prevention. Working through an established partnership with Nalo Meli Honey, the beekeeping operation would be expected to also provide agricultural outputs, as well as important ecological service through pollination of crops for Mahi Pono and other nearby agricultural operations. Preliminary estimates from the potential compatible agricultural operator indicate that approximately 5,000 pounds of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established. Furthermore, at the end of the Project’s useful life, the solar and storage facilities would be decommissioned, thereby maintaining the potential for a full range of future agricultural activities within the Project site.

For these reasons, Project implementation would help to maintain agricultural lands and expand diversified agriculture, consistent with the intent of the IAL and other applicable designations. Moreover, it would help balance Maui’s renewable energy and agricultural needs, allowing for productive, sustainable use of the land.

## 6.4.2 Chemicals and Hazardous Materials

*This section addresses the information requirements related to chemical use as specified in Section VA(4) of MAPPS for a CSUP/SSP.*

A Phase I Environmental Site Assessment was conducted for the Project site in April 2023. This assessment is part of a due diligence process intended to identify potential or existing environmental contamination liabilities and to assess whether current or historical property uses have impacted the soil or groundwater beneath the property and could pose a threat to the environment and/or human health. The results of this effort indicate that no hazardous materials are known to be present within the Project site. It was noted that based on the historical use of the property for agriculture, environmentally persistent agricultural chemicals have been applied and thus may be present in surface and shallow subsurface soils.

Minimal direct chemical application would be required for the Project. As discussed in Section 6.3.3.4, based on measures recommended by USFWS and DOFAW, non-native tree tobacco (which serve as

larval host plants for the endangered Blackburn's sphinx moth) have been proactively inspected and removed to eliminate potential moth habitat within the Project site. As recommended by the agencies, tree tobacco removal involves spot treatment with herbicide. Tree tobacco inspection and removal was conducted in September 2023, with periodic inspection and removal efforts continuing on an ongoing basis. General vegetation management would be conducted throughout Project implementation and could include localized application of herbicide, if needed in addition to livestock grazing, mowing, and weed whacking. No fertilizer would be used as part of Project activities.

No extremely hazardous materials as defined by 40 CFR 355 (*List of Extremely Hazardous Substances and Their Threshold Planning Quantities*) would be produced, used, stored, transported, or disposed as part of the Project. Construction and operations activities would require the use of some hazardous materials, such as fuels (e.g., gasoline and diesel fuel) and lubricants, which could adversely affect the environment if accidentally released. However, only a limited amount of these materials would be present onsite and BMPs would be implemented to avoid and minimize potential impacts; BMPs would include proper storage procedures (including secondary containment), routine inspection of vehicles and equipment for leaks, fueling and vehicle maintenance in offsite facilities or designated areas with secondary containment (with use of spill pads), and proper waste collection and disposal methods.

During the operational phase of the Project, oil-based products would be stored at the Project site, as the transformers use oil for insulation and cooling. Transformer oil is typically mineral oil or seed oil that is considered nontoxic and a non-hazardous substance; it does not contain polychlorinated biphenyls or compounds listed as extremely hazardous under 40 CFR 355. Transformers at the substation would be ground-mounted units constructed on concrete pads with secondary spill containment traps designed to minimize the possibility of accidental leakage. Furthermore, a Spill Prevention Control and Countermeasure (SPCC) Plan would be prepared, in accordance with the requirements of 40 CFR 112 (Oil Pollution Prevention). The plan would identify all oil storage containers, secondary containment and oil spill controls, inspection and testing protocols, training procedures, security measures, emergency response and notification procedures, key Project and regulatory contacts, and reporting requirements. Given the relatively small quantities and nature of the oil-based products, combined with secondary containment and other procedures that would be established as part of the SPCC Plan, the potential for oil-related spills and the associated effects are expected to be minimal.

As described in Section 3.3, the Project would include a battery energy storage system with a total of 24 lithium-ion battery units. The system design incorporates multiple and redundant layers of hazard controls, including passive and active measures that both inhibit and (when necessary) suppress hazardous conditions. The battery modules would be installed within fully contained, leak-proof steel enclosures equipped with fire-rated insulation, as well as temperature and smoke sensors and alarms, integrated monitoring and circuit protection, a self-contained thermal management system, an explosion prevention and mitigation system, and a fire detection and thermal runaway propagation protection system specifically designed for lithium-ion battery energy storage systems. Independent testing of the battery system would be conducted prior to commercial operation, and the battery energy storage design would achieve UL 9540 certification prior to commercial operation.

In the event a lithium-ion battery requires replacement, the battery system would be disconnected and de-energized to allow for battery removal and replacement; the old battery would be properly packaged and transported to an approved recycling facility. All stages of this process would be conducted in accordance with all relevant regulatory requirements in place at the time of replacement. In particular, transportation of the lithium-ion batteries would be conducted in accordance with U.S. Department of Transportation Pipeline and Hazardous Material Administration regulations, including 49 CFR 173.185 (Lithium Cells and Batteries). This regulation includes requirements related to testing, proper packaging (such that the batteries are completely enclosed and are separated from contact from other equipment, devices, or conductive materials), and safety measures (including those related to preventing rupture, external short circuits, and reverse current flow).

As part of the decommissioning process, removal and treatment of the battery system would be conducted in the same manner described above for battery replacement during the operational phase. Adherence to the applicable regulatory requirements would minimize potential hazards related to use, handling, transport, and disposal of batteries throughout Project operations and decommissioning.

## 6.5 Secondary Impacts on Surrounding Uses

*This section addresses the information requirements related to secondary impacts on surrounding uses as specified in Section VA(2) of MAPPs for a CSUP/SSP.*

As described in Section 5.6, the Project is primarily surrounded by agricultural land, including areas that are being cultivated (or are planned to be cultivated) by Mahi Pono as part of their overall diversified agricultural master plan (Mahi Pono 2024). In addition to diversified agriculture, Mahi Pono set aside land peripheral to their ongoing and planned agricultural activities specifically for renewable energy. As further discussed in Section 6.4.1, use of this land for the Project would not impair any of the surrounding agricultural activities and would help to support Mahi Pono's overall diversified agricultural operation by providing a valuable source of revenue.

In addition to agricultural land, other uses within approximately one mile of the Project site include the existing AES Kūihelani Solar + Storage Project, County of Maui baseyard facilities, Mā'alaea Power Plant, Keālia Pond National Wildlife Refuge, condominium developments in Mā'alaea, and the future master planned Waikapū Country Town (Figure 18).

As described in Section 3.2, AES proactively engaged in an iterative siting and design approach, incorporating due diligence efforts and stakeholder input to date, with a focus on maximizing effective use of the Project site and minimizing Project-related impacts. Through the design refinement process, the Project site was reduced by more than 250 acres (as compared to the original Project study area, as shown in Figure 4). This reduction allowed for the Project to be shifted away from Waikapū Stream and other sensitive environmental areas, as well as from Kūihelani Highway, North Kīhei Road and other publicly accessible areas, thus reducing potential Project-related impacts to surrounding uses.

As described throughout Section 6, use of heavy equipment and earthmoving operations during construction would generate noise, as well as temporary fugitive dust, erosion and sedimentation, and

internal combustion engine emissions. BMPs would be implemented to minimize noise, dust, stormwater runoff, and emission levels, such that any impacts are expected to generally be temporary, intermittent, and localized in nature. Similarly, construction would require a variety of truck deliveries and other vehicle trips; however, these are not expected to measurably affect traffic levels. Given the surrounding topography, the Project would be visible to varying degrees from certain areas, including the higher elevations of Waikapū, Wailuku, and Kula; however, as further discussed in Section 3.16, it would not obstruct or impede views of Haleakalā or Mauna Kahālāwai, the Pacific Ocean, or other scenic resources. Overall, none of these impacts would be expected to alter the character of the surrounding areas in a manner that would result in significant adverse effects.

## 6.6 Agency Consultation

*This section addresses the information requirements related to comments from government agencies as specified in Section IIG(12) of MAPPs for a CSUP/SSP.*

As detailed throughout this application, AES has proactively consulted with various regulatory and resource agencies with jurisdiction related to the Project with the input received to date incorporated as appropriate. A summary of the agency consultation conducted to date is provided in Table 9.

**Table 9. Summary of Agency Consultation Conducted To Date**

Agency	Summary of Consultation
County of Maui Planning Department	<ul style="list-style-type: none"> <li>• Preliminary meeting conducted to introduce Project held on June 19, 2024; planning department staff asked general questions regarding the proposed Project but did not provide any specific input or feedback.</li> <li>• Formal pre-application meeting held with planning department staff on September 30, 2025</li> </ul>
State Historic Preservation Division (SHPD)	<ul style="list-style-type: none"> <li>• Proposed AIS Fieldwork Strategy submitted to SHPD for review in November 2023; SHPD provided concurrence with AIS Fieldwork Strategy on January 11, 2024.</li> <li>• Draft AIS submitted to SHPD for review on August 30, 2024; in a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation (Appendix K). A Draft AMP is being developed and will be submitted for SHPD review and acceptance.</li> </ul>
Federal Aviation Administration (FAA)	<ul style="list-style-type: none"> <li>• Project information, including glare report, filed with FAA Obstruction Evaluation Group (OEG) on July 28, 2025.</li> <li>• FAA OEG issued determination of No Hazard to Air Navigation for the Project on August 19, 2025 (Appendix P).</li> </ul>
U.S. Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> <li>• Biological Resource Survey Report sent to USFWS with a request for technical assistance and input regarding impact avoidance and minimization measures.</li> <li>• USFWS provided written response dated September 6, 2024 with additional recommended avoidance and minimization measures (Appendix Q); the recommended measures have been incorporated into the Project as appropriate.</li> </ul>
State of Hawaii Department of Land and Natural Resource (DLNR) Division of Forestry and Wildlife (DOFAW)	<ul style="list-style-type: none"> <li>• Biological Resource Survey Report sent to DOFAW with a request for technical assistance and input regarding impact avoidance and minimization measures.</li> <li>• DOFAW provided written response on February 3, 2025, concurring with the measures included in the biological resources survey report and providing additional suggestions (Appendix Q).</li> </ul>
U.S. Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> <li>• Waters of the U.S. Determination and Delineation Report submitted to USACE with request for jurisdictional determination on May 29, 2024.</li> <li>• USACE provided Approved Jurisdictional Determination (confirming no Waters of the U.S. within Project site) on January 29, 2025 (Appendix N).</li> </ul>
State of Hawaii Department of Transportation (HDOT) Highways Division	<ul style="list-style-type: none"> <li>• TIAR sent to HDOT Highways Division with a request for input on August 27, 2025.</li> <li>• Response received from HDOT Highways Division on August 28, 2025 indicating no comments.</li> </ul>

# 7 Infrastructure Requirements

*The following sections address the information requirements related to various infrastructure as specified in Section IIIA through IIIG of MAPPS for a CSUP/SSP.*

## 7.1 Water

The Project site is currently comprised of fallow agricultural fields, such that no water is currently used onsite. The Project site is within the geographical boundaries of the Maui County Department of Water Supply Service Area (County of Maui 2012; Map 6-1); however, the water system does not currently service the Project site.

No water is currently available onsite for Project use (see Appendix F). The Project would incorporate a clean agent fire extinguishant for fire suppression; therefore, no water would be required for fire suppression purposes.

Water would be required during construction and operation for dust control, vehicle washdown, potential revegetation for erosion control or decommissioning, and compatible agricultural uses (e.g., drinking water for sheep). Total water consumption for both construction and operation of the Project would be minimal, with water obtained from onsite tanks (filled using water trucks). No connection to the domestic water system is expected to be required.

No comments or recommendations have been received from any government agencies regarding water use or supply.

## 7.2 Sewer

The Project site is not within the Maui County Department of Environmental Management's wastewater service area (County of Maui 2012; Map 6-1). As the site is currently comprised of fallow agricultural fields, there is currently no wastewater usage occurring onsite.

The Project would not generate any sewage or sanitary wastewater. As operation of the facilities would not involve full-time onsite staff, no permanent sanitary wastewater system would be required. Portable sanitation units would be brought onsite for construction and would be maintained for operation and maintenance staff, if needed. Sanitation units would be regularly cleaned and emptied, and periodically replaced per the manufacturer's instructions. As such, the Project is not expected to have any effect on the municipal wastewater system.

No comments or recommendations have been received from any government agencies regarding wastewater infrastructure or requirements.

## 7.3 Drainage

Drainage patterns across the Project site follow the topography, with runoff generally directed toward the two onsite gulches as well as Waikapū Stream to the east. These features flow south toward Keālia Pond and Mā‘alaea Bay beyond. No existing drainage structures are present onsite.

Project construction would result in localized topographic changes; however, existing drainage patterns would not be substantially altered. As previously described, the Project has been sited and designed based on the existing topography in order to minimize the amount of earthwork needed, with grading for installation of the solar photovoltaic equipment generally limited to smoothing existing topography in localized areas. Installation of the posts for the racking system would not be expected to heavily disturb or compact the existing ground beneath the solar photovoltaic modules. Grading activities would generally be concentrated around the equipment pads for the power conversion stations and battery energy storage system, substation and switchyard foundations, and internal access routes, as well as for civil engineering purposes (e.g., stormwater detention and management).

In addition to minimizing grading, the design incorporates other LID techniques to maintain hydrologic and hydraulic functions and reduce the potential for erosion within the Project site, with site design strategies such as conservation of natural areas, including existing vegetation, and minimization of soil compaction. Although the Project would increase the amount of impervious surface within the Project site, which can increase stormwater runoff, it is expected that impervious surfaces would increase by no more than approximately 12.8 acres (or 2.7 percent) of the overall 476.303-acre Project site (see Table 1); the new impervious surfaces would be associated with the support foundations for the racking system, equipment pads, substation, switchyard and interconnection facilities, onsite storage containers, and internal access routes. Other than the area occupied by the support foundations for the racking system, the ground beneath and around the solar photovoltaic modules would be maintained as a natural, pervious surface that is able to absorb and infiltrate stormwater, thus minimizing surface runoff within the solar arrays. Disturbed areas around the solar modules would be revegetated (either through regrowth of existing vegetation or with hydroseeding, as needed) such that erosion would not be expected to occur downgradient of the modules.

To further minimize the potential for stormwater-related impacts, the Project would also incorporate stormwater retention BMPs during and post-construction. As discussed in Section 3.5.2, these BMPs would include drainage basins installed along the downgradient edge of new impervious surfaces to retain and allow for infiltration or evapotranspiration of stormwater runoff generated by the Project, thus maintaining peak flows below pre-development levels. Additional information regarding the quantification of stormwater runoff and sizing of the infiltration trenches is provided in the Stormwater Management Design Memo contained in Appendix H.

As discussed in Section 6.3.1.5, the Project has been sited such that the solar modules, battery energy storage system, and substation/switchyard facilities would be located entirely outside the 0.2-percent annual chance floodplain (FEMA Zone X). Given the location of the Maui Electric’s existing 69kV electrical transmission lines, the interconnection lines for the Project would traverse the one-percent

annual chance floodplain (FEMA Zone A); however, the lines and supporting poles would be designed to comply with applicable codes and Maui Electric standards, including sufficient scour (erosion) and flood tolerant embedment depths and foundations, and therefore would not be susceptible to flooding nor contribute to increased flood risk. As such, the Project would not be expected to result in any flood-related impacts.

## 7.4 Roadways, Curbs, Gutters, and Sidewalks

A Traffic Impact Assessment Report (TIAR) was prepared by Fehr & Peers in August 2025 to evaluate existing and projected future traffic conditions associated with the Project. A summary of the existing roadway conditions, proposed access, and anticipated traffic impacts is summarized below. Additional details are provided in the TIAR, contained in Appendix R.

As shown on Figure 3, several existing privately-owned roads provide access to the Project site from Maui Veterans Highway, Kūihelani Highway, and North Kīhei Road. The existing access point on Maui Veterans Highway is a signalized intersection approximately 3.5 miles northeast of the Project site; an approximately 25-foot-wide plantation road (Cane Haul Road) extends from this intersection to the Project site. The existing access point from Kūihelani Highway, which provides right-in and right-out only access, is located approximately 0.8 miles north of the Project site; the road extending from this access point services the existing AES Kūihelani Solar + Storage Project and would also provide access to the Kūihelani Solar Phase 2 Project. The two existing access points from North Kīhei Road are located southwest of the Project site; existing plantation roads, referred to as South 8<sup>th</sup> and 9<sup>th</sup> Streets,<sup>48</sup> extend from these access points into the Project site. The privately-owned roads providing access to the Project site are all comprised of compacted dirt and/or gravel; none include curbs, gutters, sidewalks, or other similar features.

A combination of the four existing access points described above would be used for construction worker access to minimize travel distances and potential adverse changes to the existing level of service on public roadways (with access via North Kīhei Road only occurring during morning hours). Over the course of the construction phase, an average of 90 workers would be expected to travel to the Project site each day. At the peak of construction, it is estimated that a maximum of approximately 200 workers would travel to the site each day.

Construction equipment and material delivery would also utilize a combination of the existing access points but would primarily occur via the two access points along North Kīhei Road, particularly 9<sup>th</sup> Street, given the proximity to key delivery locations within the Project site. Delivery of construction materials and equipment is expected to require approximately 1,400 tractor trailer loads, consisting of a combination of enclosed and flat beds; oversized trucks would be required for delivery of two substation GSU transformers and the control enclosure to the Project substation. For purposes of the TIAR, it was conservatively assumed that a maximum of 40 tractor trailers would access the Project site on any given

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<sup>48</sup> Certain documents also refer to South 8<sup>th</sup> Street and 9<sup>th</sup> Street as Upper Mā'alaēa Road and Lower Mā'alaēa Road, respectively. South 8<sup>th</sup> Street (Upper Mā'alaēa Road) joins with Cane Haul Road within the Project site.

day, with twenty tractor trailers arriving, unloading, and departing during both morning and evening peak hours of traffic. The two oversized deliveries needed for the Project would occur outside of daily peak hours of traffic; a permit for transport of oversized equipment and overweight loads on state and county roadways would be obtained, as needed. Table 10 summarizes the construction trip generation used for the analysis of potential traffic impacts in the TIAR.

**Table 10. Construction Trip Generation**

Type of Construction Trip	Daily Trips	Weekday Morning (AM) Peak Hour		Weekday Afternoon (PM) Peak Hour	
		Enter	Exit	Enter	Exit
Auto	400	200	0	0	200
Trucks	80	20	20	20	20
<b>TOTAL</b>	<b>480</b>	<b>220</b>	<b>20</b>	<b>20</b>	<b>220</b>

The Project would not require substantive changes to any of the existing intersections, nor would it involve construction or improvements within the rights-of-way for any state or county roadway, including Kūihelani Highway, Maui Veterans Highway or North Kīhei Road. The privately owned roads that extend to the Project site from existing ingress/egress points on these roadways are sufficiently wide and do not require improvements.

The results of the TIAR indicate that Project construction would not significantly impact the overall level of service on roadways around the Project site, assuming use of a combination of the access points along Kūihelani Highway, Maui Veterans Highway or North Kīhei Road (with access via North Kīhei Road only occurring during morning hours). While the Maui Veterans Highway and Kūihelani Highway access points could be used alone and still operate at a desirable level, this would result in more circuitous trips for some workers and/or trucks. Similarly, for the two access points along North Kīhei Road, delays could be maintained near desirable levels by prohibiting left-turns out; however, some workers and trucks would be required to make excessively circuitous trips. Using a combination of multiple access points would minimize potential delays at the intersections, while also limiting the circuitry of trips to and from the site. As the intersection at North Kīhei Road and 8<sup>th</sup> Street is skewed, manual traffic control may be needed to accommodate turning movements of larger trucks using this access point at certain times. For this reason, as well as proximity to key delivery locations within the Project site, the 9<sup>th</sup> Street access point along North Kīhei Road would primarily be used for construction deliveries.

Prior to construction, if requested by the relevant agencies, a TMP would be prepared to address potential impacts to the surrounding roadway network and would detail the measures that would be implemented to avoid, minimize and mitigate potential impacts based on Complete Streets principles. It is expected that the measures would include but are not limited to those listed below.

- Delivery of construction materials and equipment using oversized trucks would occur during off-peak traffic hours. Other deliveries of construction materials and equipment would be timed to

minimize the overlap of multiple deliveries in a single hour and the total number of deliveries during peak traffic hours.

- Project vehicles would use right-in, right-out only access at the unsignalized driveway on Kūihelani Highway.
- Temporary signage would be installed proximate to the proposed access points to indicate the presence of trucks and inform drivers that trucks are entering/exiting the roadway.
- The sight distance at each access point would be confirmed prior to construction and vegetation along the shoulder of the unsignalized driveways would be managed to ensure required sight distance is available at all times.<sup>49</sup>
- If any construction projects are planned to occur on nearby properties during the same time frame, the timing of deliveries would be coordinated to minimize traffic-related impacts.

Once the Project is operational, it is expected that no more than five vehicle trips per day would be required to support operation and maintenance activities, using a combination of the four access points. As such, Project operations would not be expected to measurably impact traffic on roads surrounding the Project site.

A copy of the TIAR was provided to HDOT Highways Division and County of Maui Department of Transportation for review on August 27, 2025; a response was received from HDOT Highways Division on August 28, 2025 indicating no comments.

## 7.5 Electrical, Telephone, and Cable

The Project site comprises fallow agricultural fields and does not currently have any electrical, telephone, or cable service. Several 69kV electrical transmission lines, which are owned and operated by Maui Electric, traverse the Project site; however, these transmission lines do not provide electrical service to the site.

## 7.6 Solid Waste

Solid waste on Maui is handled at the Central Maui Landfill Refuse and Recycling Center, which is located in Pu'unene, approximately 4.5 miles northeast of the Project site (County of Maui 2024c). This facility accepts construction and demolition waste; green waste and wood can be composted at Maui EKO Systems, located adjacent to the Central Maui Landfill (County of Maui 2024d). In addition, materials such as concrete, asphalt, rock, dirt, and sand are accepted for recycling at Hawai'i Materials Recycling, located in Kihei approximately 6 miles southeast of the Project site.

Construction of the Project is not anticipated to generate a significant amount of solid waste. During construction, all waste would be temporarily stored onsite and periodically transported by the

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<sup>49</sup> A preliminary review of sight distance for the access points was conducted as part of the TIAR and no issues were identified.

construction contractor for recycling or disposal at a permitted landfill, such as the nearby Central Maui Landfill Refuse and Recycling Center. Little to no waste would be generated during operation.

At the end of the operational period, the Project would be decommissioned, which would involve removal of all Project equipment from the Project site. As described in Section 3.7, decommissioning would be conducted in accordance with industry standards, with all equipment and materials treated according to the highest and best use. Equipment and materials would be refurbished, salvaged, or recycled to the extent feasible and in coordination with licensed sub-contractors, local waste haulers and/or other facilities that recycle construction/demolition waste or refurbish equipment or, where feasible, repurposed locally for community benefit. If necessary and as required, components that cannot be reused, salvaged, recycled, or repurposed would be disposed of off-island at an authorized solid waste facility or landfill.

In total, construction, operation, and decommissioning of the Project is not expected to generate significant new demand for solid waste management services. No comments or recommendations have been received from any government agencies regarding the solid waste disposal or recycling requirements for the Project.

## 7.7 Other Infrastructure

The Project is not expected to involve any other infrastructure requirements.

# 8 Public Services

*The following sections address the information requirements related to various public services as specified in Section IVA through IVC of MAPPS for a CSUP/SSP.*

## 8.1 Parks

There are no existing recreational areas within or immediately adjacent to the Project site. Keālia Pond National Wildlife Refuge is located approximately 0.3 miles south of the Project. Two trails associated with the Keālia Pond National Wildlife Refuge – the Keālia Coastal Boardwalk and the Kanuimanu Dike Trail – are located approximately 0.6 miles and 1.2 miles southeast of the Project site, respectively (USFWS 2024).

There are a variety of beach access points along Mā‘alaea Bay to the south, including Haycroft Park, Kīhei Flats, Keālia Beach, and Kīhei Memorial Park – the nearest of which is approximately 0.6 miles from the Project site (Figure 18; County of Maui 2024a). Other recreation facilities in the Project vicinity include the King Kamehameha Golf Club (approximately 1.1 miles west of the Project site), the Waikapū Community Center and Park (approximately 2.1 miles to the northwest), the Central Maui Regional Sports Complex (approximately 2.2 miles to the north), Kenolio Park (approximately 2.6 miles to the southeast), and Maui Lani Regional Park (approximately 2.7 miles to the north).

As described in Section 3.5, there are no hiking trails in proximity to the Project site. The closest recreational trails identified by Na Ala Hele are the Lahaina Pali Trail, located approximately 1.1 mile west of the Project site, and Maui Motocross Track (Maui Raceway Park), located just east of Maui Veterans Highway approximately 1.8 miles from the Project site (see Figure 18; State of Hawai‘i 2024).

The Project would not impede access, affect use, increase demand, or otherwise impact any of these existing recreational facilities. No additional public facilities would be required to serve the Project.

## 8.2 Schools

The Project site is within the area served by Puu Kukui Elementary School, Iao Middle School, and Baldwin High School (DOE 2024). There are also various private schools throughout the region. The Project would not impact these existing educational facilities, nor would it increase the need for educational facilities as the Project would not induce population growth.

## 8.3 Public Services

### 8.3.1 Fire Response Services

Fire response services are provided by the County of Maui Department of Fire and Public Safety. There are 10 fire stations on the island of Maui, including two – the Kahului Fire Station and the Wailuku Fire Station – within five miles of the Project site.

As detailed in Section 3.3.9, the Project would incorporate multiple layers of fire prevention and suppression measures, consistent with applicable regulations, plans, and policies. Specifically, the Project would comply with NFPA 1 and NEC requirements for fire prevention for utility-scale solar facilities, including installation of non-vegetated fire breaks around various Project components as well as the perimeter of the Project site. A minimum 30-foot non-vegetated fire break would be installed around the perimeter of the Project site as well as the various electrical equipment (e.g., a 20-foot buffer within the fence line and 10-foot buffer outside the fence line). Vegetation management would also occur along the overhead electrical collector lines to maintain a minimum 20-foot clearance. Vegetation within the remainder of the Project site would be managed to control combustible materials, while still providing enough ground cover to prevent erosion and support compatible agricultural activities. In addition, the battery systems would be fully contained within temperature-controlled, leak-proof steel enclosures equipped with fire-rated insulation, as well as temperature and smoke sensors and alarms, integrated monitoring and circuit protection, a self-contained thermal management system, an explosion prevention and mitigation system, and a fire detection and thermal runaway propagation protection system specifically designed for lithium-ion battery energy storage system. Independent testing of the battery system would be conducted prior to commercial operation, and the battery energy storage design would achieve UL 9540 certification prior to commercial operation. The existing access roads as well as internal access routes within the Project site would be able to accommodate fire apparatus and would meet the relevant specifications identified in the fire code; the Project is not expected to need to provide water supply for fire flow as no occupied buildings would be constructed within the Project site.

The County of Maui Department of Fire and Public Safety will be consulted through the Project development process, with review of relevant permit applications and design drawings prior to construction, on-site training and orientation offered prior to commercial operation, and annual meetings offered throughout the operational phase. For these reasons, the Project is not expected to increase the need for fire response or otherwise impact fire protection services.

### 8.3.2 Libraries

There are 2 public libraries – the Kahului Public Library and the Wailuku Public Library – within five miles of the Project site. The Project would not impact these or any other libraries, nor would it increase the need for library facilities as the Project would not induce population growth.

### 8.3.3 Police Services

Police services are provided by the County of Maui Police Department, with six patrol districts serving the island of Maui. The Project site is within District I Wailuku, which covers the largest geographic range of the six districts, including nearly all of central Maui (County of Maui 2022). The police station is located on Mahalani Street in Kahului, approximately 4 miles north of the Project site.

During construction, the Project site would be staffed with security personnel on an as-needed basis to protect equipment and machinery used to construct the Project. During operations, the facilities would be adequately secured and are not expected to require additional security on a regular basis. A surveillance system would be incorporated at key areas (such as the substation and power conversion

stations) and additional security measures (such as fence-top deterrents) would be added if the need arises. As such, the Project is not expected to increase the demand for or otherwise affect police services.

#### 8.3.4 Emergency Medical Services

The Maui Memorial Medical Center, located on Mahalani Street in Kahului, is the nearest hospital and provides emergency medical services. The Project is not expected to increase the demand for or otherwise affect emergency medical services.

# 9 Community Engagement

*This section addresses the information requirements related to community meetings and feedback as specified in Section IIIH(2) of MAPPS for a CSUP/SSP.*

## 9.1 Community Meetings and Other Stakeholder Engagement

AES is firmly committed to partnering and collaborating with the community to develop its projects in a responsible manner. To support this effort, AES retained Peters Communications to assist with stakeholder engagement. Stakeholder engagement efforts were initiated soon after the Project was selected for development through the Hawaiian Electric Stage 3 RFP process, building on existing stakeholder relationships and engagement activities conducted for the Kūihelani Solar + Storage Project, with stakeholder feedback proactively incorporated into the Project development process. A summary of the stakeholder engagement efforts to date is provided below; additional detail is contained in the Community Outreach Report (Appendix S).

Over the course of the Project's pre-development process, AES shared Project-related information and conducted stakeholder outreach and consultation through meetings and correspondence with area leaders, community associations, interested organizations and individual community members. Specific outreach and engagement efforts are listed below.

- Preliminary public sentiment survey of 359 Maui residents (SMS Research, February – March 2022, margin of error +/- 5.8 %, 95% confidence interval):
  - 70% of respondents support similar utility-scale solar and battery storage projects, 16% neutral, 7% oppose, and 7% don't know.
  - Top three reasons for support: (1) reduces costs of electricity; (2) cuts down on fossil fuel use; and (3) good for the environment or climate & community.
- Development of a Project website (<https://www.aes-hawaii.com/hawaii/project/kuihelani-solar-phase-2>) to provide current information on an ongoing basis throughout Project development.
- Establishment of a dedicated email ([kuihelani2solar@aes.com](mailto:kuihelani2solar@aes.com)) and Project hotline (808-800-3942) to receive input regarding the Project; to date, 41 individuals and organizations have registered to receive Project updates.
- Consultation with native Hawaiian organizations, agencies and community members, and cultural and lineal descendants as part of the CIA process; a total of 46 individuals/organizations were contacted as part of this effort (see Section 6.1.2 and Appendix L for additional detail).
- Virtual presentation and meeting with area elected officials including State Representative Tyson Miyake (House District 10), State Senator Troy Hashimoto (Senate District 5), and Councilmember Tom Cook (South Maui) (February 27 and March 1, 2024).

- Group meeting with labor representatives including Hawaii Carpenters Union, Pacific Resource Partnership, Operating Engineers (Local 3), and Hawaii Laborers & Employers Cooperation and Education Trust Fund (March 14, 2024).
- Virtual community meeting, publicized through the local media (Maui News advertisements and media advisory issued to statewide and regional news outlets) and recorded for on-demand viewing; a total of 25 community members attended the meeting (August 27, 2024).
- Virtual meeting with Waikapū Community Association, the largest and most active community association in the Project vicinity; a total of 35 individuals attended the meeting including area elected officials Council Chair Alice Lee and Representative Tyson Miyake (September 9, 2024).
- Monthly email updates to community members and area elected officials apprising them of the latest Project news and seeking feedback on the Project design as well as how AES can support the community financially through a “Community Benefits Program”.

In general, feedback received through these various outreach and engagement efforts have indicated support for renewable energy projects such as Kūihelani Solar Phase 2 Project due to the environmental and potential economic benefits. In particular, stakeholders are supportive of the jobs that would be created, as they would provide living wages and opportunities for careers in green energy for Hawai‘i residents. Specific questions regarding potential impacts and other aspects of the Project related to construction traffic, wildfire safety, workforce development, and decommissioning. Detailed information regarding these issues and the steps taken by AES to address them are detailed in the respective sections of this application. Specific stakeholder feedback is contained in the Community Outreach Report (Appendix S).

In addition to the outreach and engagement conducted to date, AES will continue to proactively engage the community through the remainder of the Project development process. In addition, Project stakeholders will have an opportunity to provide input as part of the CSUP/SSP process. Adjacent landowners and recorded lessees will be notified of the application submittal and public hearing for the permit, as summarized below. Furthermore, notification will be provided to the community prior to construction.

## 9.2 Notice of Application

In compliance with the requirements of MCC Chapter 19.510.010(E), a Notice of Application and Project location map was mailed to all owners and recorded lessees within 500 feet of the Project TMK boundaries concurrently with the submittal of the CSUP/SSP application to the County of Maui Department of Planning. The Notice of Application and the list of all owners and recorded lessees within 500 feet of the Project TMK (with an associated map) are contained in Appendices A8 and A7, respectively. In addition, a notarized affidavit of mailing of the Notice of Application is contained in Appendix A9.

## 9.3 Notice of Public Hearing

In compliance with the requirements of MCC Chapter 19.510.020(A)(4), a Notice of Public Hearing will be mailed by certified or registered mail, return receipt requested, to owners/lessees of record within 500 feet of the Project TMK no less than 30 calendar days prior to the public hearing for the CSUP/SSP. A notarized affidavit of mailing of the Notice of Public Hearing and certified mail return receipts will be submitted to the Planning Department at least 10 business days prior to the public hearing.

The Notice of Public Hearing will be published once a week for three consecutive weeks prior to the date of the public hearing in a newspaper which is printed and issued at least twice weekly in the county and is generally circulated throughout the county. A certified copy of the published notice will be submitted to the Planning Director at least six days prior to the date of public hearing.

## 9.4 Community Benefits Program

As part of Hawaiian Electric's Stage 3 RFP, AES is required to provide a Community Benefits Package to support non-profit organizations and community initiatives that benefit residents in the vicinity of the Project. AES is passionate about ensuring communities benefit from hosting its' projects. For Kūihelani Solar Phase 2, AES is committing \$120,000 annually within six months after the Project is operational for area charitable causes that benefit the community.

# 10 Compliance with Applicable Regulations, Plans, and Policies

## 10.1 State Regulations, Plans, and Policies

*This section addresses the relationship of the proposed project to relevant regulatory controls, plans, policies, and guidelines as specified in Section IIH(6) of MAPPs for a CSUP/SSP, except as otherwise noted.*

### 10.1.1 Hawai'i Environmental Policy Act (HRS Chapter 343)

*This section addresses the information requirements related to HRS Chapter 343 compliance as specified in Section IF of MAPPs for a CSUP/SSP.*

HRS Chapter 343, the Hawai'i Environmental Policy Act, requires that environmental review be conducted for any applicant action that (1) requires one or more approvals<sup>50</sup> prior to implementation and (2) includes one or more triggers identified in HRS Chapter 343-5(a); these requirements are detailed in HAR Section 11-200.1, which are the implementing rules for compliance with HRS Chapter 343. The Project does not involve any of the triggers identified in HRS Chapter 343-5(a) such that environmental review under HRS Chapter 343 is not required.

### 10.1.2 State Land Use Law (HRS Chapter 205)

*This section addresses the information requirements related to the applicable state land use district as specified in Section IID(1) of MAPPs for a CSUP/SSP.*

The Hawai'i State Land Use Law (HRS Chapter 205) established the LUC and granted the authority to classify all lands in the state into one of four land use districts: urban, rural, agricultural, and conservation. HRS Chapter 205 specifies the uses that are permitted within the state agricultural land use district, with consideration given to the LSB classification system. The LSB system rates the productivity of soils throughout the state based on characteristics including texture, slope, salinity, erodibility, and rainfall, and designates areas in categories ranging from A to E (with Class A representing the most productive soils and Class E representing the least productive soils). HRS Chapter 205-2(d) specifies that the agricultural district shall include:

*(6) Solar energy facilities; provided that:*

- (A) This paragraph shall apply only to land with soil classified by the land study bureau's detailed land classification as overall (master) productivity rating class B, C, D, or E; and*
- (B) Solar energy facilities placed within land with soil classified as overall productivity rating class B or C shall not occupy more than ten per cent of the acreage of the parcel, or twenty acres of land, whichever is lesser, unless a special use permit is granted pursuant to section 205-6;*

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<sup>50</sup> Approval is defined as a discretionary consent required from an agency prior to implementation of an action (HAR Section 11-200.1-2).

HRS Chapter 205-4.5 further specifies that solar energy facilities on Class B or C soils shall be restricted to the following:

*“(21) Solar energy facilities on lands with soil classified by the land study bureau’s detailed land classification as overall (master) productivity rating B or C for which a special use permit is granted pursuant to section 205-6; provided that:*

- (A) The area occupied by the solar energy facilities is also made available for compatible agricultural activities<sup>51</sup> at a lease rate that is at least fifty per cent below the fair market rent for comparable properties;*
- (B) Proof of financial security to decommission the facility is provided to the satisfaction of the appropriate county planning commission prior to date of commencement of commercial generation; and*
- (C) Solar energy facilities shall be decommissioned at the owner’s expense according to the following requirements:*
  - (i) Removal of all equipment related to the solar energy facility within twelve months of the conclusion of operation or useful life; and*
  - (ii) Restoration of the disturbed earth to substantially the same physical condition as existed prior to the development of the solar energy facility.*

As shown on Figures 10 and 16, the Project site is entirely within the state agricultural district and would comprise LSB Class B and E soils (with more than twenty acres of LSB Class B soils). Therefore, pursuant to HRS Chapters 205-2(d) and 205-4.5, the Project requires an SSP (which is the subject of this application). The Project incorporates the specific provisions of HRS Chapter 205-4.5(21), as detailed throughout this document. As discussed in Section 3.4, the Project would exceed the statutory requirements for compatible agriculture, with implementation of compatible agricultural activities (e.g., livestock production and beekeeping) in partnership with a local agricultural operator; specific resources committed to support the partner(s) include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. The required proof of financial security for decommissioning would be provided to the Maui Planning Commission prior to the commencement of commercial generation; the financial security would be in the form of a parent guaranty, bond, or letter of credit, with the security to remain in place for the duration of the Project. The activities that would occur as part of decommissioning are discussed in Section 3.7, with further detail contained in the Decommissioning Plan (Appendix J). Upon decommissioning, the Project site would be returned to its existing condition (or comparable), thereby maintaining open space resources and the potential for a full range of future agricultural activities. Based on this approach, and with approval of this SSP, the Project would be consistent with HRS Chapter 205.

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<sup>51</sup> Per HRS Chapter 205-4.5, “agricultural activities” means: (1) cultivation of crops, including crops for bioenergy, flowers, vegetables, foliage, fruits, forage, and timber; (2) game and fish propagation; and (3) raising of livestock, including poultry, bees, fish, or other animal or aquatic life that are propagated for economic or personal use.

### 10.1.3 Important Agricultural Lands (HRS Chapter 205 Part III)

HRS Chapter 205 (Part III) establishes the basis for designation of IALs as a means to conserve and protect agricultural lands, promote diversified agriculture, increase agricultural self-sufficiency, and assure the availability of agriculturally suitable lands. HRS Chapter 205-42 defines IALs as those lands that “(1) are capable of producing sustained high agricultural yields when treated and managed according to accepted farming methods and technology; (2) contribute to the State’s economic base and produce agricultural commodities for export or local consumption; or (3) are needed to promote the expansion of agricultural activities and income for the future, even if currently not in production.” HRS Chapter 205 identifies specific standards and criteria for the identification of IALs and establishes three processes by which IALs may be designated: (1) identification and designation of public lands per HRS Chapter 205-44.5; (2) voluntary petition by a landowner per HRS Chapter 205-45; and (3) mandatory identification of potential IALs by each county per HRS Chapter 205-47.

The Project site falls within an approximately 27,102-acre area that was designated as IAL in 2009, prior to the discontinuation of sugarcane cultivation by HC&S. The Project site is located on the western periphery of the area designated as IAL and comprises approximately 1.6 percent of the 27,102-acre designated area (Figure 27). As discussed in Section 6.4.1, the proposed solar energy facility is a permitted use in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP. The Project would also incorporate compatible agricultural activities which are expected to provide meaningful agricultural outputs for local consumption. Furthermore, the Project would support Mahi Pono’s diversified agricultural operation across its 41,000-acre land holdings by providing a valuable source of revenue. At the end of the Project’s useful life, the solar and storage facilities would be decommissioned, thereby maintaining the potential for a full range of future agricultural activities within the Project site. For these reasons, the Project is consistent with the intent of the IAL designation, pursuant to HRS Chapter 205 (Part III).

### 10.1.4 Hawai’i State Planning Act (HRS Chapter 226)

The Hawai’i State Planning Act (HRS Chapter 226) is a broad policy document relating to the statewide planning system, including all activities, programs and decisions made by local and state agencies. It is intended to “improve the planning process in this state, to increase the effectiveness of government and private actions, to improve coordination among different agencies and levels of government, to provide for wise use of Hawai’i’s resources and to guide the future development of the state” (HRS Chapter 226-1). The State Plan serves as written guide for the long-range development of the state by describing the desired future for the residents of Hawai’i and providing a set of goals, objectives, and policies that are intended to shape the general direction of public and private development. Part I of the State Plan lists the state’s long-range goals, objectives, policies and priorities. Part II establishes a statewide planning system to coordinate and implement the State Plan. Part III establishes priority guidelines to address areas of statewide concern.

The stated goals of the state plan relate to a strong viable economy, a desired physical environment, and individual and family well-being (HRS Chapter 226-4). Overall, the Project supports these goals; in

particular, it would serve to provide a source of clean renewable energy that reduces the use of fossil fuels to meet the state’s energy needs, while providing environmental, human health, and economic benefits. Consistency of the Project with the specific objectives and policies in the Hawai’i State Plan is summarized in Table 11. Consistency of the Project with the specific relevant priority guidelines in the Hawai’i State Plan is summarized in Table 12. Relevant state functional plans are discussed in the following subsection.

**Table 11. Project Consistency with the Objectives and Policies of the Hawai’i State Planning Act**

Objectives	Assessment of Consistency with Objectives and Policies
<p><b>Population:</b> <i>It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.</i></p>	<p>The Project would be consistent with the objective and policies of this theme, particularly the following policy:  <i>(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.</i></p> <p>The Project does not include housing units and is not anticipated to affect population growth. However, it would have positive economic impacts for Maui County and the State of Hawai’i through job creation, tax payments, and other secondary benefits. See Section 6.2.1 for a discussion of the Project’s economic benefits.</p>
<p><b>Economy - In General:</b> <i>Planning for the State's economy in general shall be directed toward achievement of the following objectives:</i>  <i>(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai’i’s people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.</i>  <i>(2) A steadily growing and diversified economic base that is not overly dependent on a few industries and includes the development and expansion of industries on the neighbor islands.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:  <i>(7) Expand existing markets and penetrate new markets for Hawai’i’s products and services.</i>  <i>(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawai’i.</i></p> <p>The Project would contribute to Hawai’i’s growing renewable energy market and would provide employment opportunities for Hawai’i residents, particularly during construction. Although operations would not include many labor-intensive activities, the Project would advance the renewable energy sector and positively contribute to Hawai’i’s economy; the Project would also include a Community Benefits Package with beneficiaries identified by the community receiving approximately \$120,000 per year. Additional details regarding the economic benefits are provided in Section 6.2.1.</p>
<p><b>Economy – Agriculture:</b> <i>Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</i>  <i>(1) Viability of Hawai’i’s sugar and pineapple industries.</i>  <i>(2) Growth and development of diversified agriculture throughout the State.</i>  <i>(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai’i’s strategic, economic, and social well-being.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:  <i>(2) Encourage agriculture by making the best use of natural resources.</i>  <i>(12) In addition to the State's priority on food, expand Hawai’i’s agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.</i>  <i>(18) Increase and develop small-scale farms.</i></p> <p>The land within the Project site is not currently used for agriculture and has been fallow since sugarcane cultivation ceased in 2016, nor is future cultivation contemplated by the landowner. The Project would incorporate and subsidize compatible agricultural activities (e.g., sheep production and beekeeping) in partnership with a local agricultural operator; specific resources committed to support the agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses (see Section 3.4).</p>

Objectives	Assessment of Consistency with Objectives and Policies
<p><b>Economy – Visitor Industry:</b> Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy.</p>	<p>This objective is not directly applicable as the Project would not impact the visitor industry. However, the Project would improve energy security and grid stability, thus contributing to energy resilience for the tourist industry (e.g., hotels, restaurants, etc.), which would in turn support the quality of the visitor experience on Maui.</p>
<p><b>Economy – Federal Expenditures:</b> Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawai'i's economy.</p>	<p>This objective is not applicable as the Project does not involve any federal expenditure.</p>
<p><b>Economy - Potential Growth and Innovative Activities:</b> Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base.</p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p>(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawai'i's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.</p> <p>(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.</p> <p>The Project would contribute to and further diversify Hawai'i's economy and employment opportunities through its contribution to Hawai'i's renewable energy market, as well as integration of compatible agricultural activities within the Project site.</p>
<p><b>Economy - Information Industry:</b> Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawai'i as a leader in broadband and wireless communications and applications in the Pacific Region.</p>	<p>This objective is not applicable as the Project would not impact the economy as it relates to telecommunication and information technology.</p>
<p><b>Physical Environment - Land-based, Shoreline, and Marine Resources:</b> Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:</p> <p>(1) Prudent use of Hawai'i's land-based, shoreline, and marine resources.</p> <p>(2) Effective protection of Hawai'i's unique and fragile environmental resources.</p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p>(3) Take into account the physical attributes of areas when planning and designing activities and facilities.</p> <p>(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.</p> <p>(8) Pursue compatible relationships among activities, facilities, and natural resources.</p> <p>An iterative siting and design process was used to avoid and minimize potential impacts to the environment; through this process, the Project was sited to include a 650-foot minimum setback from Waikapū Stream and a protective buffer around the onsite gulches. The resulting Project site is comprised of fallow agricultural land dominated by non-native species. As detailed in Section 6.3, BMPs and other measures would be implemented to further avoid and minimize potential impacts to those resources within and surrounding the Project site.</p>

Objectives	Assessment of Consistency with Objectives and Policies
<p><b>Physical Environment - Scenic, Natural Beauty, and Historic Resources:</b> <i>Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p><i>(1) Promote the preservation and restoration of significant natural and historic resources.</i></p> <p><i>(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.</i></p> <p>The Project AIS identified four historic properties, all of which are related to commercial agricultural activities. Archaeological monitoring, based on an AMP subject to approval by SHPD, would be conducted as part of the Project.</p> <p>The Project would be visible to varying degrees from surrounding areas; however, it would not obstruct or impede views of Haleakalā, Mauna Kahālawai, the Pacific Ocean or other scenic resources. The Project would introduce new visual elements to the landscape, but these would be sub-dominant to co-dominant features and would be seen in the context of surrounding uses including high-voltage transmission lines, agricultural operations, industrial and commercial structures, and other man-made features. Furthermore, views of the Project from nearby roadways would be largely screened by intervening topography and vegetation. After decommissioning, the Project site would be returned to substantially the same condition as existed prior to Project development. Considering these factors, the Project is expected to have minimal impact on Maui County's scenic and visual resources.</p>
<p><b>Physical Environment - Land, Air, and Water Quality:</b> <i>Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:</i></p> <p><i>(1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.</i></p> <p><i>(2) Greater public awareness and appreciation of Hawai'i's environmental resources.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p><i>(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.</i></p> <p><i>(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.</i></p> <p>The Project would avoid impacts to surface water features through a minimum 650-foot setback from Waikapū Stream and protective buffer around Pale'a'ahu Gulch and Pōhākea Gulch. BMPs would also be implemented to avoid and minimize downstream water quality impacts as well as air quality impacts associated with construction. The Project would generate clean renewable energy, replacing a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health.</p>
<p><b>Facility Systems – In General:</b> <i>Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p><i>(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.</i></p> <p><i>(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.</i></p> <p>The Project would help meet the state's renewable energy needs by providing up to 40 MW of solar energy and 160 MWh of battery energy storage. The energy produced by the Project would be sold at a fixed price and would help to hedge long-term price volatility for the duration of the PPA term. The Project would also help to improve electric grid stability by providing energy storage to meet peak demand.</p>

Objectives	Assessment of Consistency with Objectives and Policies
<p><b>Facility Systems – Solid and Liquid Wastes:</b> Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:</p> <p>(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.</p> <p>(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.</p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p>(2) Promote reuse and recycling to reduce solid and liquid wastes and employ a conservation ethic.</p> <p>Construction and operation of the Project would generate very little waste. At the end of Project operations, all equipment would be decommissioned and removed from the Project site. It is anticipated that most materials would be refurbished, salvaged, or recycled. Only a small portion of the Project equipment would be disposed of as solid waste; these materials would be disposed of off-island at an authorized site(s) in accordance with applicable laws.</p>
<p><b>Facility Systems – Water:</b> Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.</p>	<p>This objective is not applicable as the Project would not impact Hawai'i's facility systems related to water. The Project would require minimal water during both construction and operation for dust control, vehicle washdown, and compatible agricultural activities; water would be obtained from onsite tanks (filled using water trucks).</p>
<p><b>Facility Systems – Transportation:</b> Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:</p> <p>(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.</p> <p>(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.</p>	<p>This objective is not applicable as the Project would not impact Hawai'i's facility systems related to transportation. The Project would utilize existing access points and would not require any construction or improvements within the rights-of-way for any state or county roadway, or any other transportation resources. A TIAR conducted for the Project concluded that neither construction nor operation would significantly impact traffic on the surrounding roadways.</p>
<p><b>Facility Systems – Energy:</b> Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:</p> <p>(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;</p> <p>(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawai'i's dependence on imported fuels for electrical generation and ground transportation;</p> <p>(3) Greater diversification of energy generation in the face of threats to Hawai'i's energy supplies and systems;</p> <p>(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and</p> <p>(5) Utility models that make the social and financial interests of Hawai'i's utility customers a priority.</p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policies:</p> <p>(1) Support research and development as well as promote the use of renewable energy sources.</p> <p>(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;</p> <p>(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;</p> <p>(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies.</p> <p>(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;</p> <p>The Project would help Hawai'i meet the state's need for renewable energy by providing up to 40 MW of solar energy and 160 MWh of battery energy storage, which is enough electricity to power the equivalent of approximately 18,425 homes annually (based on average energy use). In doing so, it would directly contribute to the state's renewable energy goals, and would supply a meaningful portion of Maui's energy needs for the duration of the PPA term. The energy</p>

Objectives	Assessment of Consistency with Objectives and Policies
	<p>from the Project would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. As described in Section 2.1, the Project was selected through Hawaiian Electric’s competitive procurement process, which entailed a detailed analysis of these benefits and resulted in a fixed price that would help to hedge against future price volatility associated with fossil fuel-based power.</p>
<p><b>Facility Systems – Telecommunications:</b> Planning for the State’s telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.</p>	<p>This objective is not applicable as the Project would not impact facility systems related to telecommunications.</p>
<p><b>Socio-Cultural Advancement - Housing:</b> Planning for the State’s socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:</p> <p>(1) Greater opportunities for Hawai’i’s people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more rental and for sale affordable housing is made available to extremely low-, very low-, lower-, moderate-, and above moderate-income segments of Hawai’i’s population.</p> <p>(2) The orderly development of residential areas sensitive to community needs and other land uses.</p> <p>(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai’i’s people.</p>	<p>This objective is not directly applicable as the Project would not impact housing. However, as the Project would provide fixed-rate electricity and help mitigate the negative economic effects of volatile oil prices, it would indirectly support this objective by helping to stabilize household energy costs.</p>
<p><b>Socio-Cultural Advancement – Health:</b> Planning for the State’s socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:</p> <p>(1) Fulfillment of basic individual health needs of the general public.</p> <p>(2) Maintenance of sanitary and environmentally healthful conditions in Hawai’i’s communities.</p> <p>(3) Elimination of health disparities by identifying and addressing social determinants of health.</p>	<p>This objective is not applicable as the Project would not impact public health. However, as the Project would replace a portion of electricity that is currently generated by burning fossil fuels, it would indirectly support this objective by reducing greenhouse gas emissions and other forms of pollution that are detrimental to human health.</p>
<p><b>Socio-Cultural Advancement – Education:</b> Planning for the State’s socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.</p>	<p>This objective is not applicable as the Project would not impact education.</p>
<p><b>Socio-Cultural Advancement – Social Services:</b> Planning for the State’s socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and</p>	<p>This objective is not applicable as the Project would not impact social services.</p>

Objectives	Assessment of Consistency with Objectives and Policies
<p><i>private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.</i></p>	
<p><b>Socio-Cultural Advancement – Leisure:</b> <i>Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.</i></p>	<p>This objective is not applicable as the Project would not impact leisure activities.</p>
<p><b>Socio-Cultural Advancement – Individual Rights and Personal Well-Being:</b> <i>Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.</i></p>	<p>This objective is not applicable as the Project would not impact individuals' rights and personal well-being as it relates to increasing (or decreasing) an individual's ability to fulfill their socio-economic needs and aspirations.</p>
<p><b>Socio-Cultural Advancement – Culture:</b> <i>Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.</i></p>	<p>The Project would be consistent with the objectives and policies of this theme, particularly the following policy:  <i>(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.</i></p> <p>A CIA (including a Ka Pa'akai Analysis) was conducted to assess the potential effect of the Project on cultural beliefs, practices, and resource based on archival and background research, historic document review, and community consultation. The CIA identified cultural resources and practices within Waikapū Ahupua'a; however, none of these resources or practices occur within the Project site. Regardless, the Project would implement the recommended mitigation measures (see Section 6.1.2).</p>
<p><b>Socio-Cultural Advancement – Public Safety:</b> <i>Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:</i></p> <p><i>(1) Assurance of public safety and adequate protection of life and property for all people.</i></p> <p><i>(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.</i></p> <p><i>(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's people.</i></p>	<p>While the Project would not impact public safety programs, it would indirectly support this objective by incorporating a variety of safety features to facilitate monitoring and safe operation of the system. Specific features would include an emergency management system with multiple layers of monitoring and safety features, mechanisms to allow for disconnection and rapid shutdown of the system, and multiple and redundant fire prevention and suppression features. As the Project incorporates protection for public safety and property, it would be consistent with the stated public safety objectives.</p>
<p><b>Socio-Cultural Advancement – Government:</b> <i>Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</i></p> <p><i>(1) Efficient, effective, and responsive government services at all levels in the State.</i></p> <p><i>(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.</i></p>	<p>This objective is not applicable, as the Project would not impact socio-cultural advancement of the government.</p>

**Table 12. Project Consistency with the Priority Guidelines of the Hawai'i State Planning Act**

Priority Guidelines	Assessment of Consistency with Priority Guidelines
<b>Economic Priority Guidelines</b>	
<p><i>(a) To stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy</i></p>	<p>The Project would be consistent with these priority guidelines, particularly the following:</p> <p><i>(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises</i></p> <p><i>(A) Encourage investments which:</i></p> <p><i>(i) reflect long-term commitments to the State</i></p> <p><i>(iii) diversify the economy</i></p> <p><i>(v) are sensitive to community needs and priorities</i></p> <p>The Project would contribute to the State of Hawai'i's growing renewable energy industry, helping to both diversify Hawai'i's economy and provide job opportunities to residents. The power generated by the Project would be sold to Maui Electric under a new fixed-price PPA. As the Project would help mitigate negative economic effects of volatile oil prices, it would help to stabilize energy costs for Hawai'i's residents and businesses. The Project would also include a Community Benefits Package with beneficiaries identified by the community receiving approximately \$120,000 per year.</p>
<p><i>(b) To promote the economic health and quality of the visitor industry</i></p>	<p>These guidelines are not directly applicable as the Project would not impact the visitor industry. However, the Project would improve energy security and grid stability, thus contributing to energy stability for the tourist industry (e.g., hotels, restaurants) which would in turn support the quality of the visitor experience on Maui.</p>
<p><i>(c) To promote the continued viability of the sugar and pineapple industries</i></p>	<p>These guidelines are not applicable as the Project would have no effect on the sugar/pineapple industries. Although sugarcane was previously cultivated in the Project site, the plantation closed in 2016 and the land has since been fallow. The Project would contribute to the agricultural industry by incorporating compatible agricultural activities such as sheep production and beekeeping.</p>
<p><i>(d) To promote the growth and development of diversified agriculture and aquaculture</i></p>	<p>The Project would be consistent with these priority guidelines, particularly the following:</p> <p><i>(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.</i></p> <p><i>(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.</i></p> <p>The Project would contribute to the development and expansion of diversified agriculture by incorporating and subsidizing compatible agricultural activities in partnership with local agricultural partners; specific resources committed to support those partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. After Project decommissioning, the land would be returned to substantially the same condition as existed prior to development of the solar facilities, thus maintaining the potential for a full range of future agricultural activities within the Project site.</p>
<p><i>(e) Water use and development</i></p>	<p>These guidelines are not applicable as the Project would not impact water use and development as no connection to the domestic water system would be required. The Project would require minimal water for dust control, vehicle washdown, and compatible agricultural activities; water would be obtained from onsite tanks (filled using water trucks).</p>

Priority Guidelines	Assessment of Consistency with Priority Guidelines
<i>(f) Energy use and development</i>	<p>The Project would be consistent with these priority guidelines for energy use and development, particularly the following:</p> <p><i>(1) Encourage the development, demonstration, and commercialization of renewable energy sources.</i></p> <p>The Project would help to meet the state’s need for renewable energy by providing up to 40 MW of solar energy and 160 MWh of battery storage. The energy produced by the Project would provide electricity for the equivalent of approximately 18,425 homes annually (based on average energy use) and would help to replace lost generation capacity associated with the impending retirement of the Kahului and Mā’alaea power plants. It would also allow solar energy to be stored and dispatched at times of higher demand thus offsetting night-time fossil fuel generation.</p>
<i>(g) To promote the development of the information industry</i>	These guidelines are not applicable as the Project would have no impact on the information industry.
<b>Population Growth and Land Resources Priority Guidelines</b>	
<i>(a) To effect desired statewide growth and distribution</i>	These guidelines are not applicable as the Project would not impact statewide growth and distribution.
<i>(b) Regional growth distribution and land resource utilization</i>	<p>The Project would be consistent with these guidelines, particularly the following:</p> <p><i>(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district</i></p> <p><i>(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized</i></p> <p>The Project is consistent with these priority guidelines as it would not remove land from the agricultural district. As a permitted use in both the state agricultural land use district and county agricultural zoning district (with issuance of a CSUP/SSP), the proposed solar energy facility would incorporate and subsidize compatible agricultural activities within the Project site in partnership with local agricultural partners. The Project has been sited to avoid sensitive environmental habitats by incorporating a 650-foot minimum setback from Waikapū Stream and a protective buffer around onsite gulches. BMPs would be implemented to further minimize impacts to these features and other natural resources. At the end of the Project’s useful life, the solar and storage facilities would be decommissioned, thereby maintaining the potential for a full range of future agricultural activities within the Project site.</p>
<b>Crime and Criminal Justice Priority Guidelines</b>	
<i>Priority guidelines in the area of crime and criminal justice</i>	This guideline is not applicable as the Project would not impact crime and criminal justice.
<b>Affordable Housing Priority Guidelines</b>	
<i>Priority guidelines for the provision of affordable housing</i>	This guideline is not applicable as the Project would not impact affordable housing.
<b>Quality Education Priority Guidelines</b>	
<i>Priority guidelines to promote quality education</i>	This guideline is not applicable as the Project would not impact quality education.

Priority Guidelines	Assessment of Consistency with Priority Guidelines
<b>Sustainability Priority Guidelines</b>	
<p><i>Priority guidelines to promote sustainability</i></p>	<p>The Project would be consistent with these priority guidelines, particularly the following:</p> <ul style="list-style-type: none"> <li><i>(1) Encouraging balanced economic, social, community, and environmental priorities.</i></li> <li><i>(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.</i></li> <li><i>(3) Promoting a diversified and dynamic economy.</i></li> <li><i>(4) Encouraging respect for the host culture.</i></li> <li><i>(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.</i></li> </ul> <p>The Project would help to meet Hawai'i's economic, social, community and environmental priorities by providing clean, renewable solar energy with minimal adverse effects on the environment. In addition to helping meet the state's renewable energy goals, the Project would also contribute to economic and social welfare by creating local employment opportunities, providing a source of revenue for the state, helping to hedge against long-term volatility in energy prices, and improving stability of Maui's electric grid. The Project would also include a Community Benefits Package with beneficiaries identified by the community receiving approximately \$120,000 per year.</p>
<b>Climate Change Adaptation Priority Guidelines</b>	
<p><i>Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy</i></p>	<p>The Project would be consistent with these priority guidelines, particularly the following:</p> <ul style="list-style-type: none"> <li><i>(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.</i></li> </ul> <p>The Project would involve generation and storage of clean, renewable solar energy, thus contributing to Hawai'i's renewable energy goals. The solar energy from the Project would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions, which is a key driver of climate change.</p>

**10.1.4.1 Functional Plans**

In addition to establishing goals, objectives, and policies for the State of Hawai'i, HRS Chapter 226 also directs state agencies to prepare state functional plans for statewide priority issues. A total of 13 functional plans have been developed related to: agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism and transportation. The plans most relevant to the Project are the agriculture and energy state plans; both plans were approved by the Governor on May 22, 1991. The Agricultural Functional Plan was coordinated by the Department of Agriculture, while the Energy Functional Plan was coordinated by the Department of Business, Economic Development and Tourism (DBEDT). A brief discussion of the Project's consistency with each of these plans follows.

**Agricultural Functional Plan.** The agriculture functional plan describes the vision of agriculture in Hawai'i as having (a) growth and size of the sugar industry determined by optimal economic efficiency; (b) continued growth in pineapple production with more growth expected in production of fresh

pineapple; and (c) greatest growth in diversified crops and products (DOA 1991). The plan outlines actions directed at the factors and conditions that are key to achieving this vision; these relate to industry research and development, agricultural pests and the environment, land and water, and services and infrastructure. The plan identifies objectives, policies, and priority actions relative to each of these issues. The majority of these relate to the broader agricultural industry and are not applicable to the Project; however, the Project would be consistent with the following:

- **Objective H:** *Achievement of productive agricultural use of lands most suitable and needed for agriculture*
- **Policy H(2):** *Conserve and protect important agricultural lands in accordance with the Hawaii State Constitution.*
- **Action H(2)(c):** *Administer land use district boundary amendments, permitted land uses, infrastructure standards, and other planning and regulatory functions on important agricultural lands and lands in agricultural use, so as to ensure the availability of agriculturally suitable lands and promote diversified agriculture.*

The Project is located within the state agricultural land use district and is part of a 27,102-acre area designated as IAL in 2009, when the land was being cultivated as part of a sugarcane plantation. The land within the Project site is not currently used for agricultural purposes and has been fallow and unused since sugarcane plantation operations ceased in 2016. Pursuant to HRS Chapter 205-4.5(a)(21), the Project is permitted within the state agricultural land use district with approval of an SSP by the LUC and compliance with the provisions related to decommissioning, proof of financial security, and making the Project site available for compatible agricultural activities at a lease rate below fair market rent. As described in Section 3.4, AES would exceed these statutory requirements by making the land within the Project site available at no cost and dedicating substantial resources to a local agricultural partner for implementation of compatible agricultural activities. Based on an executed LOI (Appendix G), AES plans to partner with a local agricultural operator to expand their sheep production and grazing operation and establish a beekeeping operation within the Project site; other resources committed to the agricultural partner include infrastructure, consultant resources, and financial support for operational expenses. Preliminary estimates from the potential compatible agricultural operator indicate that approximately 5,000 pounds of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established. The Project also incorporates specific decommissioning requirements in which the land would be returned to substantially the same condition as existed prior to Project development, thus allowing for the full range of future agricultural uses. As the solar facilities are a permitted land use in the agricultural district and would include a compatible agricultural plan that would be supported and subsidized over the duration of the Project term, the Project is consistent with the agriculture functional plan.

**Energy Functional Plan.** The energy functional plan describes an overall objective of achieving dependable, efficient and economical statewide energy systems capable of supporting the needs of the people and increasing energy self-sufficiency. The plan specifically identifies the need to reduce

dependence on imported fossil fuels such as oil and the state’s vulnerability to supply disruptions (DBEDT 1991). The plan establishes policies and actions to promote energy conservation and efficiency, displace fossil fuel consumption, support public education and legislation on energy, improve the development and management of energy, and assist with energy emergency preparedness. The following polices and actions are applicable to the Project:

- **Objective B:** *Displace oil and fossil fuels through alternate and renewable energy resources*
- **Policy B(1):** *Displace oil and fossil fuel consumption through the application of appropriate alternate and renewable energy resources and technologies.*
- **Action B(1)(l):** *Expand upon the existing 20 kW photovoltaic utility-scale application<sup>52</sup>*
- **Action B(1)(q):** *Support expanded commercialization of photovoltaics and other solar technologies for electricity, transportation, air conditioning, refrigeration, desalination, dehumidification and cogeneration.*

The purpose of the Project is to reduce the need and reliance on fossil fuels and provide a renewable energy source for the island of Maui. It would provide up to 40 MW of solar energy and 160 MWh of battery storage, which is enough electricity to power the equivalent of approximately 18,425 homes (based on average energy use). The solar energy from the Project would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. In this manner, the Project is consistent with the Energy Functional Plan.

### 10.1.5 Coastal Zone Management Program (HRS Chapter 205A)

Under the authority of the federal Coastal Zone Management Act (16 U.S.C. § 1451-1456), the Hawai’i CZM Program was enacted as HRS Chapter 205A and is administered by the State of Hawai’i Office of Planning and Sustainable Development. The purpose of the Hawai’i CZM program is to provide for the effective management, beneficial use, protection, and development of the coastal zone. It is designed to integrate decisions made by state and county agencies to provide greater coordination and compliance with existing laws and rules. The CZM area encompasses the entire state. The objectives of the Hawai’i CZM Program are listed in Table 13, with a brief statement regarding the consistency of the Project with each of the objectives and associated policies.

**Table 13. Project Consistency with the Objective and Policies of the Hawai’i CZM Program**

Objectives and Policies Assessment of Consistency	Objectives and Policies Assessment of Consistency
<b>Recreational Resources:</b> Provide coastal recreational opportunities accessible to the public.	The Project site does not support coastal nor any other type of recreational resources; the nearest coastal recreational areas are approximately 0.6 miles south of the Project site. The Project would not impair access to the shoreline, degrade the quality of coastal waters, or otherwise affect coastal recreational opportunities.

<sup>52</sup> The application referred to in this action is a 20kW PVUSA system on Maui that was designed to demonstrate photovoltaics in a utility setting.

Objectives and Policies Assessment of Consistency	Objectives and Policies Assessment of Consistency
<p><b>Historic Resources:</b> Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.</p>	<p>An AIS was conducted for the Project, including background research, a 100 percent pedestrian inspection, and subsurface testing throughout the Project site. The AIS identified four historic properties, all of which are related to commercial agricultural activities. In a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation (Appendix K). An AMP will be submitted to SHPD; SHPD acceptance of the AMP will be obtained prior to Project initiation.</p>
<p><b>Scenic and Open Space Resources:</b> Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.</p>	<p>Within the Project site, the solar photovoltaic and storage facilities would have a relatively small permanent footprint, with natural vegetation between and around the equipment. The facilities would be visible to varying degrees from surrounding areas; however, they would not obstruct or impede views of Haleakalā, Mauna Kahālāwai, the Pacific Ocean or other scenic resources. The Project would introduce new visual elements within the landscape, but these would be sub-dominant to co-dominant features in the landscape setting and would be seen in the context of surrounding uses including high-voltage transmission lines, agricultural operations, industrial and commercial structures and other man-made features. Furthermore, views of the Project from nearby roadways would be largely screened by intervening topography and vegetation. After decommissioning, the Project site would be returned to substantially the same condition as existed prior to Project development. Considering these factors, the Project is expected to have minimal impact on Maui County’s scenic and visual resources.</p>
<p><b>Coastal Ecosystems:</b> Protect valuable coastal ecosystems, including reefs, from disruption and to minimize adverse impacts on all coastal ecosystems.</p>	<p>The Project is located approximately 0.5 miles inland from the shoreline and would not involve work within or near coastal ecosystems. Ground disturbance during construction has the potential to temporarily increase sediment and other pollutants in stormwater runoff, which could affect water quality in water features which flow to the ocean. However, the Project has been designed to incorporate a minimum 650-foot setback from Waikapū Stream and protective buffers along onsite gulches. BMPs would be implemented to further minimize the potential for water quality impacts to these features, such that coastal ecosystems would not be adversely affected.</p>
<p><b>Economic Uses:</b> Provide public or private facilities and improvements important to the State’s economy in suitable locations.</p>	<p>The Project is not a coastal-dependent development. It would involve construction and operation of a solar energy facility in an inland location, within the state agricultural land use district and county agricultural zoning district. As a solar energy facility, the Project is permitted in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP, as well as compliance with the provisions of HRS Chapter 205. Compliance with these requirements is described in Section 10.1.2.</p>
<p><b>Coastal Hazards:</b> Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.</p>	<p>The solar photovoltaic modules, battery energy storage system, Project substation, and switchyard have been specifically sited outside of the tsunami evacuation and flood hazard zones. Portions of the interconnection lines would be within a flood hazard zone but would be designed to comply with the appropriate design standards and would not contribute to flooding or any other coastal hazards.</p>
<p><b>Managing Development:</b> Improve the development review process, communication, and public participation in the management of coastal resources and hazards.</p>	<p>AES initiated outreach and consultation with Project stakeholders early in the Project development process, and engagement efforts will continue through the permitting and construction phase of the Project. In particular, the CSUP/SSP process will include opportunities for public participation. Section 9 provides more specifics regarding public outreach efforts for the Project.</p>

Objectives and Policies Assessment of Consistency	Objectives and Policies Assessment of Consistency
<b>Public Participation:</b> Stimulate public awareness, education, and participation in coastal management.	The Project does not contain a public participation component for programmatic coastal management issues. Project-specific input has and will continue to be sought through the permitting process.
<b>Beach Protection:</b> Protect beaches for public use and recreation.	The Project would be located approximately 0.5 miles inland from the nearest beach and would not involve placement of any structures within the shoreline setback area or otherwise affect erosion or natural shoreline processes.
<b>Marine Resources:</b> Promote the protection, use, and development of marine and coastal resources to assure their sustainability.	The Project would be located approximately 0.5 miles from the shoreline and would not directly or indirectly affect any marine resources.

## 10.2 County Regulations, Plans, and Policies

*The following sections address the information requirements related to the Maui County General Plan (i.e., Countywide Policy Plan, Maui Island Plan, and Community Plan) as specified in Sections IIA through IIC of MAPPS for a CSUP/SSP.*

### 10.2.1 Maui County General Plan

The Maui County General Plan is a long-term, comprehensive blueprint for the physical, economic, environmental development and cultural identity of the county. As described in the Maui County Charter (2021 edition), “the general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.”

The Maui County 2030 General Plan is the decennial general plan update (thus replacing the General Plan of 1990) and includes multiple components. The first component consists of the Countywide Policy Plan, which was adopted by Ordinance No. 3732 in March 2010. The Countywide Policy Plan presents the overall goals, objectives, policies, and implementing actions that portray the desired direction for the County (County of Maui 2010). It provides the overarching policy framework for the Maui Island Plan, as well as the respective community plans. The Maui Island Plan (adopted as Ordinance No. 4004 in December 2012) provides more specific direction for growth and decision-making with goals, objectives, policies and actions for the island of Maui. It delineates areas for future urban and rural growth as part of a Directed Growth Strategy, and identifies and addresses key environmental, housing and economic development issues (County of Maui 2012). In addition to these two components are specific community plans which provide focused recommendations to address the goals, objectives and policies of the General Plan, based on the values and unique attributes of each community plan area. A total of nine community plan areas have been identified within the county; the Project site is entirely within the Kīhei-Mākena community plan area. The Kīhei-Mākena Community Plan was first adopted in 1985, updated with the revised plan adopted as Ordinance No. 2641 in 1998; an update to this plan (renamed as the South Maui Community Plan) is currently in progress (County of Maui 1998; County of

Maui 2025b). The following subsections discuss the extent to which the Project would comply with the intent of the applicable policies, objectives and provisions of each component of the general plan.

#### 10.2.1.1 Countywide Policy Plan

The Countywide Policy Plan establishes goals, objectives, policies, and implementing actions that relate to the desired direction for the county. These relate to 11 key themes: natural environment, local cultures and traditions, education, social and healthcare services, housing opportunities, local economy, parks and public facilities, transportation, physical infrastructure, land use and growth management, and governance (County of Maui 2010). As detailed throughout this document, the Project would not be expected to affect education, social and healthcare services, housing opportunities, or parks and public facilities. As such, the objectives and policies for these topic areas are not discussed further. The Project is expected to be consistent with the objectives and policies of the other key topics addressed in the Countywide Policy Plan, as described below.

#### **Theme A: Protect the Natural Environment**

The goal for this topic area is that Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity. The objectives and policies that are relevant to the Project are as follows:

##### **Objective 1 Improve the opportunity to experience the natural beauty and native biodiversity of the islands for present and future generations.**

- Policy 1a Perpetuate native Hawaiian biodiversity by preventing the introduction of invasive species, containing or eliminating existing noxious pests, and protecting critical habitat areas.
- Policy 1c Restore and protect forests, wetlands, watersheds, and stream flows, and guard against wildfires, flooding and erosion.
- Policy 1g Preserve and provide ongoing care for important scenic vistas, view planes, landscapes, and open-space resources.

**Relevance:** *The Project site is comprised of fallow agricultural land dominated by non-native species; no critical habitat occurs within or directly adjacent to the Project site. An iterative siting and design process was used to avoid and minimize potential impacts to sensitive environmental features; as a result of this process, the Project includes a 650-foot minimum setback from Waikapū Stream and a protective buffer around the onsite gulches. Additionally, a variety of impact avoidance and minimization measures would be incorporated into the Project to protect natural resources, including multiple layers of fire prevention and suppression measures, stormwater retention and erosion control BMPs, as well as measures to minimize impacts to biological resources consistent with recommendations provided by USFWS and DOWAW.*

*The Project would be visible to varying degrees from surrounding areas, but would not obstruct or impede views of Haleakalā, Mauna Kahālāwai, the Pacific Ocean or other valuable scenic resources.*

*Views of the Project from nearby roadways would be largely screened by intervening topography and vegetation. Where visible, the Project components would introduce new elements within the landscape, but these would appear as sub-dominant to co-dominant features in the landscape setting. Upon decommissioning, the Project site would be returned to its existing condition (or comparable), thereby maintaining open space resources and the potential for a full range of future agricultural activities. For these reasons, the Project would help to maintain Maui's natural beauty and biodiversity for present and future generations.*

**Objective 2 Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island.**

Policy 2e Mitigate the negative effects of upland uses on coastal wetlands, marine life, and coral reefs.

Policy 2f Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff.

**Relevance:** *The Project has been designed to minimize ground disturbance and maintain ample, natural open space surrounding the facilities; a relatively small area of new impervious surfaces (approximately 12.8 acres) would be added to the Project site. In addition, LID design techniques have been incorporated to maintain permeability throughout the Project site as well as minimize the potential for erosion. The Project would also implement stormwater management BMPs during and post-construction to retain and treat stormwater within the Project site. A SWPPP as well as drainage and erosion control plans would be prepared prior to construction and would detail the BMPs to be implemented to prevent and minimize discharge of pollutants to downstream waters, including erosion prevention, sediment control, and good housekeeping measures. These measures would minimize the potential for discharge of sediment and other pollutants in stormwater runoff, such that the Project would not negatively affect coastal wetlands, marine life, coral reefs, or other locally valued natural resources.*

**Objective 3 Improve the stewardship of the natural environment.**

Policy 3a Preserve and protect natural resources with significant scenic, economic, cultural, environmental, or recreational value.

Policy 3c Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.

Policy 3f Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.

**Implementing Actions**

3a Document, record, and monitoring existing conditions, populations, and locations of flora and fauna communities.

**Relevance:** *As described in Section 6.3.3, a biological resources survey was conducted to characterize the species and habitats present, and to determine whether state or federally listed species, or otherwise*

rare plants or animals have the potential to occur and could be impacted by construction or operation of the Project. The results of this and other due diligence studies were used to inform the Project siting and design process, evaluation of potential impacts, as well as the identification of measures to avoid and minimize impacts to valuable natural resources, as detailed throughout this document. Once implemented, the Project would provide a meaningful source of clean, renewable energy, thus reducing the island's reliance on fossil fuels and the associated contribution to global climate change. As such, the Project is consistent with the objective and policies related to stewardship of the natural environment.

**Objective 4 Educate residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people.**

Policy 4b Align priorities to recognize that the health of the natural environment and the health of people are inextricably linked.

Policy 4c Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship.

**Relevance:** *The clean, renewable energy produced by the Project would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. By contributing to environmental stewardship and reduction of greenhouse gas emissions, the Project would substantially contribute to the health of both the natural environment and human population, and thus would be consistent with the stated objective and policies.*

**Theme B: Preserve Local Cultures and Traditions**

The goal for this topic area is that Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents' multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage. The objectives and policies that are relevant to the Project are as follows:

**Objective 1 Perpetuate the Hawaiian culture as a vital force in the lives of residents.**

Policy 1a Protect and preserve access to mountain, ocean, and island resources for traditional Hawaiian cultural practices.

Policy 1b Prohibit inappropriate development of cultural lands and sites that are important for traditional Hawaiian cultural practices and establish mandates for the special protection of these lands in perpetuity.

**Relevance:** *As detailed in Section 6.1.2, a CIA (including a Ka Pa'akai Analysis) was conducted to identify cultural beliefs, practices, and resources that could be affected by the Project. This effort included archival and background research, historic document review, and community consultation. The CIA identified valuable cultural resources and practices that occur within Waikapū Ahupua'a; however, no ongoing cultural practices or resources were identified within the Project site. Furthermore, no traditional or other contemporary trails are known to occur within or adjacent to the Project site, such*

that the Project is not expected to affect access to mountain, ocean, or other island resources used for traditional cultural practices. Based on the recommendations identified through the CIA process, the Project would incorporate measures to be implemented in the event previously unknown cultural resources are discovered. Given the conclusions of the CIA and with implementation of the recommended measures, the Project would be consistent with the objective and policies related to preserving local cultures and traditions.

#### **Theme F: Strengthen the Local Economy**

The goal for this topic area is that Maui County's economy will be diverse, sustainable, and supportive of community values. The objectives and policies that are relevant to the Project are as follows:

**Objective 1 Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth.**

- Policy 1a Support economic decisions that create long-term benefits.
- Policy 1b Promote lifelong education, career development, and technical training for existing and emerging industries.
- Policy 1c Invest in infrastructure, facilities, and programs that foster economic diversification.
- Policy 1e Support programs that assist industries to retain and attract more local labor and facilitate the creation of jobs that offer a living wage.

**Relevance:** *The Project would help to promote diversity and sustainability of Maui's economy by helping to grow the renewable energy market. Project implementation would result in job creation and training, tax payments, and other secondary benefits, thus providing substantial direct and indirect economic benefits. In total, over its lifetime (including pre-development, operations, and decommissioning), the Project is expected to generate or sustain approximately 1,541 total jobs in Hawai'i, with approximately \$89.6 million in labor income, and total economic output of approximately \$251.9 million. As such, the Project would contribute to economic diversification and sustainable growth in compliance with the stated objective and policies.*

**Objective 2 Diversify and expand sustainable forms of agriculture and aquaculture.**

- Policy 2a Prioritize the use of agricultural land to feed the local population, and promote the use of agricultural lands for sustainable and diversified agricultural activities.
- Policy 2d Assist farmers to help make Maui County more self-sufficient in food production.

**Relevance:** *In addition to helping to diversify Maui's economy through its contribution to the renewable energy market, the Project would also incorporate and subsidize compatible agricultural activities (such as sheep production and beekeeping) in partnership with local agricultural partners. Specific resources committed to local agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Preliminary estimates from the potential compatible agricultural operator indicate that approximately 5,000 pounds*

of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established. Furthermore, the Project would support Mahi Pono's efforts related to diversified and local food production by providing a valuable source of revenue for their operations. Through these efforts, the Project would contribute to expansion of diversified agriculture.

**Objective 4 Expand economic sectors that increase living-wage job choices and are compatible with community values.**

Policy 4a Support emerging industries, including the following:

- Renewable-energy industry;
- High-technology and knowledge-based industries;
- Education and training industry;

**Relevance:** *The Project would directly contribute to the renewable energy industry, which is specifically identified as a target for policy support. The Project would help to diversify Maui's economy and provide well-paying jobs to residents in an industry that is broadly supported by the community. As such, it is consistent with the objectives and policies of the Countywide Policy Plan related to the local economy.*

**Theme H: Diversify Transportation Options**

The goal for this topic area is that Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods. The objectives and policies that are relevant to the Project are as follows:

**Objective 1 Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable.**

Policy 1a Execute planning strategies to reduce traffic congestion.

Policy 1i Collaborate with transit agencies, government agencies, employers, and operators to provide planning strategies that reduce peak-hour traffic.

**Relevance:** *Construction and operation of the Project would utilize a combination of existing access points on Kūihelani Highway, Maui Veterans Highway, and North Kīhei Road. The Project would not require any physical changes to any of the existing intersections, nor would it involve construction or improvements within the rights-of-way for any state or county roadway. As discussed in Section 7.4, a TIAR concluded that traffic related to Project would not significantly impact the overall level of service at the proposed access point intersections. Prior to construction, if requested by the relevant agencies, a TMP would be prepared to address potential impacts to the surrounding roadway network and would detail the measures that would be implemented to avoid and minimize potential impacts based on Complete Streets principles. As such, the Project is not expected to significantly impact traffic congestion or transit systems, and would be in compliance with the objective and policies of the Countywide Policy Plan related to an effective and sustainable transportation system.*

## **Theme I: Improve Physical Infrastructure**

The goal for this topic area is that Maui County’s physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies. The objectives and policies that are relevant to the Project are as follows:

**Objective 1 Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.**

- Policy 1a Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents.

***Relevance:** The Project would have minimal water requirements during construction and operation for dust control, vehicle washdown, and compatible agricultural uses (e.g., drinking water for sheep). Water requirements would be met using onsite tanks (filled using water trucks). No connection to the domestic water system would be required. As such, the Project would comply with the objective and policies of the Countywide Policy Plan related to water systems.*

**Objective 3 Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.**

- Policy 3a Promote the use of locally renewable energy sources, and reward energy efficiency.
- Policy 3e Expand renewable-energy production.
- Policy 3k Reduce Maui County’s dependence of fossil fuels and energy imports.
- Policy 3m Promote and support environmentally friendly practices in all energy sectors.

***Relevance:** The Project entails the construction and operation of 40 MW of solar energy generation with 160 MWh of battery storage – a renewable source of clean energy that would help the island of Maui reduce its dependence on fossil fuels and energy imports. The Project would provide the energy needed to power the equivalent of approximately 18,425 homes on Maui each year and would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. The Project has been sited and designed to minimize environmental impacts, representing an environmentally sensitive development of locally-produced renewable energy resources. As such, the Project would comply with the objective and policies of the Countywide Policy Plan related to renewable energy.*

## **Theme J: Promote Sustainable Land Use and Growth Management**

The goal for this topic area is that community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner. The objectives and policies that are relevant to the Project are as follows:

**Objective 2 Improve planning for and management of agricultural lands and rural areas.**

- Policy 2a Protect prime, productive, and potentially productive agricultural lands to maintain the island’s agricultural and rural identities and economies.

- Policy 2c Discourage developing or subdividing agriculturally designated lands when non-agricultural activities would be primary uses.
- Policy 2d Conduct agricultural-development planning to facilitate robust and sustainable agricultural activities.

**Relevance:** *The Project site is within a 27,102-acre area that was formerly part of an extensive sugarcane plantation and was designated as IAL in 2009. The land within the Project site is not currently used for agricultural purposes and has been fallow since sugarcane cultivation ceased in 2016. As a solar energy facility, the Project is a permitted use in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP. In an effort to balance Maui’s renewable energy and diversified agricultural needs, the Project would incorporate compatible agricultural activities within the Project site, exceeding the statutory requirements for solar projects on agricultural land. The Project facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities within the Project site. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support local agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses within the Project site. For these reasons, the Project is consistent with the objective and policies of the Countywide Policy Plan related to management of agricultural lands.*

**Objective 4 Improve and increase efficiency in land use planning and management.**

- Policy 4a Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses.
- Policy 4b Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts.
- Policy 4e Coordinate with Federal, State, and County officials in order to ensure that land use decisions are consistent with County plans and the vision local populations have for their communities.
- Policy 4g Improve land use decision making through the use of land- and geographic information systems.

**Relevance:** *The Project would provide a source of clean, renewable energy for the island of Maui, and is needed to achieve the state’s energy goals of generating 100 percent of energy from renewable sources as well as to offset the loss of power generation resulting from the planned retirement of fossil fuel-fired generating units at the Kahului Power Plant and Mā’alaea Power Plant. In addition, the Project would help to achieve the objectives and policies of the Maui Island General Plan promoting the use of*

*alternative energy sources. As part of this application for a CSUP/SSP, the potential impacts to natural ecosystems, biological resources, wildfire habitat and surrounding uses have been considered, and measures that would be implemented to avoid and minimize potential impacts have been identified. AES has engaged with governmental agencies, organizations, community members, and other stakeholders to inform them of the Project as well as to obtain feedback for consideration in the design and development process. For these reasons, the Project is consistent with the objective and policies of the Countywide Policy Plan related to sustainable land use and growth management.*

### **Theme K: Strive for Good Governance**

The goal for this topic area is that government services will be transparent, effective, efficient, and responsive to the needs of residents. The objectives and policies that are relevant to the Project are as follows:

#### **Objective 2 Promote civic engagement.**

- Policy 2a Foster consensus building through in-depth, innovative, and accessible public participatory processes.
- Policy 2b Promote and ensure public participation and equal access to government among all citizens.
- Policy 2g Expand opportunities for all members of the public to participate in public meetings and forums.

#### Implementing Actions

- 2d Develop a project-review process that mandates early and ongoing consultation in and with communities affected by planning and land use activities.

**Relevance:** *As discussed in Section 9, AES initiated outreach and consultation with Project stakeholders early in the planning process to provide information about the proposed solar and energy storage facility and to request stakeholder input. Input obtained through this process has been incorporated into the Project, resulting in refinement of the site layout as well as providing guidance for the Project’s community benefits package. Community engagement efforts will continue over the course of the Project development and implementation process, consistent with the objective and policies of the Countywide Policy Plan related to civic engagement.*

#### **10.2.1.2 Maui Island Plan**

The Maui Island Plan provides direction for future growth, the economy, and social and environmental decisions based on the following vision for the island of Maui: “Ua mau ke ea o ka `āina i ka pono. Maui Island will be environmentally, economically, and culturally sustainable with clean, safe, and livable communities and small towns that will protect and perpetuate a pono lifestyle for the future” (County of Maui 2012). It specifies a set of core values and identifies supporting goals, objectives, and policies related to the use and development of land, extension and improvement of transportation services and infrastructure, development of community facilities, expansion of the island’s economic base, provision

of housing, and protection of natural and cultural resources. The goals, objectives and policies that are applicable to the Project are discussed below.

### **Heritage Resources**

The discussion of heritage resources presents goals related to cultural, historic and archaeological resources; shoreline, reef and nearshore waters; watersheds, streams and wetlands; wildlife and natural areas; and scenic resources. The goals, objectives, and policies that are relevant to the Project are discussed below.

#### **Goal 2.1: Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.**

- Objective 2.1.3 Enhance the island’s historic, archaeological, and cultural resources.
- Policy 2.1.3.c Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD’s administrative rules, including consultation and monitoring during construction phases of projects.
- Policy 2.1.3.h Ensure compliance with historic preservation laws, and discourage demolition of properties that are determined to be eligible for listing on the National or State Register of Historic Places.

**Relevance:** *An AIS was conducted for the Project and included background research, a 100 percent pedestrian inspection, and subsurface testing throughout the Project site. A total of four historic properties were identified, all of which are related to commercial agricultural activities. In a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation. An AMP will be submitted to SHPD; SHPD acceptance of the AMP will be obtained prior to Project initiation. In addition to the AIS, a CIA and Ka Pa‘akai Analysis were conducted to assess the potential effect of the Project on cultural beliefs, practices, and resources, including traditional cultural properties. This effort included archival and background research, review of historic documents, and consultation with cultural practitioners, lineal descendants, Native Hawaiian organizations, agencies, and others with relevant knowledge. Through this process, it was found that valuable cultural resources and practices occur within Waikapū Ahupua‘a; however, no ongoing cultural practices or cultural resources were identified within the Project site. Based on recommendations received through the CIA process, the Project would incorporate measures to be implemented in the event previously unknown cultural resources are discovered.*

*These studies incorporated a thorough approach and were conducted in compliance with the applicable rules and guidelines. The conclusions and recommendations have been incorporated into the Project*

development process, with continuing consultation and monitoring as appropriate. As such, the Project would be consistent with objective and policies related to protecting archaeological and cultural resources.

**Goal 2.2: An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity.**

**Objective 2.2.3 Water quality that meets or exceeds State Clean Water Act standards.**

Policy 2.2.3.a Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and NPS pollution.

**Relevance:** *The Project has been designed to minimize ground disturbance and maintain ample, natural open space surrounding the facilities, with no more than approximately 12.8 acres of new impervious surfaces added to the Project site. In addition, LID design techniques have been incorporated to maintain permeability throughout the Project site as well as minimize the potential for erosion. The Project would also incorporate stormwater retention BMPs during and post-construction to retain and treat stormwater within the Project site. A SWPPP as well as drainage and erosion control plans would be prepared prior to construction and would detail the BMPs to be implemented to prevent and minimize discharge of pollutants to downstream waters, including erosion prevention, sediment control, and good housekeeping measures. Based on these efforts, the Project would be in compliance with the County of Maui's rules relating to soil erosion and sedimentation control and storm drainage facilities, as well as the State's water quality standards. As such, the Project would be consistent with the objective and policies in the Maui Island Plan relating to maintenance of water quality and protection of nearshore waters.*

**Goal: 2.3: Healthy watersheds, streams, and riparian environments.**

**Objective 2.3.2 Decreased non-point source and point source pollution.**

Policy 2.3.2.a Enforce water pollution related standards and codes.

Policy 2.3.2.b Support the use of LID Techniques such as those described in the State of Hawai'i LID Practitioner's Guide (June 2006), as amended.

**Relevance:** *As discussed in Section 7.3, the Project design incorporates LID techniques to maintain hydrologic and hydraulic functions and reduce the potential for erosion within the Project site, with site design strategies such as conservation of natural areas, including existing vegetation, and minimization of soil compaction. In addition, stormwater retention BMPs would be implemented to retain and treat stormwater within the Project site, and a SWPPP and erosion control plans would be implemented to prevent and minimize discharge of pollutants to downstream waters. The Project would comply with all applicable county and state water quality requirements and standards, thereby complying with the objective and policies in the Maui Island Plan related to decreasing non-point source and point source pollution.*

**Objective 2.3.3 Preserve existing wetlands and improve and restore degraded wetlands.**

Policy 2.3.3.c Where applicable, require developers to provide a wetland protection buffer and/or other protective measures around and between development and wetland resources.

**Relevance:** *As described in Section 3.2, an iterative siting and design process was used to avoid and minimize potential impacts to sensitive environmental features (including surface water features); through this process, the Project was sited to include a 650-foot minimum setback from Waikapū Stream and a 200-foot buffer around Pale‘a‘ahu Gulch and Pōhākea Gulch. No solar modules, battery energy storage equipment, or substation/switchyard facilities would be located within this buffer. Additionally, no improvements would be made to any of the existing roads within 200 feet of these gulches. A limited amount of work would occur within the buffer for Pōhākea Gulch and Pale‘a‘ahu Gulch to interconnect the Project via the designated GCPs identified by Maui Electric, as well as to install two overhead spans of medium-voltage electrical collector lines. However, this work has been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; no ground disturbance would occur within the gulch boundaries, and the poles and associated work pads would be located a minimum of 50 feet from the gulch. As the Project incorporates protective buffers and would not involve any work within any surface water features, it is consistent with the stated objectives and policy related to protecting wetlands.*

**Goal 2.5: Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents’ quality of life, attract visitors, provide a connection to the past, and promote a sense of place.**

**Objective 2.5.1 A greater level of protection for scenic resources.**

Policy 2.5.1.a Protect views to include, but not be limited to, Haleakalā, Īao Valley, the Mauna Kahālāwai (West Maui Mountains), Pu‘u Ōla‘i, Kaho‘olawe, Molokini, Moloka‘i, and Lāna‘i, Mauna Kea, Mauna Loa, sea stacks, the Pacific Ocean, and significant water features, ridgelines, and landforms.

Policy 2.5.1.b Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view planes.

Policy 2.5.1.c Protect “night sky” resources by encouraging the implementation of ambient light ordinances and encouraging conversion of all sources that create excessive light pollution, affecting our ability to view the stars.

Policy 2.5.1.e Protect scenic resources along Maui’s scenic roadway corridors.

**Relevance:** *As discussed in Section 6.3.2, a detailed visual assessment, including photo-realistic simulations, was conducted to evaluate the extent to which Project components may be potentially visible and noticeable. The results of the assessment indicate that views of the Project would range from completely screened to partially screened to unobstructed depending on the viewing angle, distance, and*

*extent of intervening structures, vegetation, and terrain. Where visible, Project components would appear as a sub-dominant to co-dominant features in the landscape setting. Given the low profile of the solar photovoltaic modules, the Project would not block views of Mauna Kahālāwai, Haleakalā, the Pacific Ocean, or other scenic views and vistas, nor significantly affect scenic resources along Maui’s scenic roadway corridors, including Honoapi’ilani Highway and North Kīhei Road. Furthermore, the Project would not involve nighttime lighting, thus helping to protect “night sky” resources. Considering these factors, the Project would be in compliance with the Maui Island Plan objective and policies related to protection of scenic resources.*

**Objective 2.5.2 Reduce impacts of development projects and public-utility improvements on scenic resources.**

Policy 2.5.2.f Ensure little or no effect on scenic resources from utility improvements, primarily power poles.

Policy 2.5.2.g Protect scenic vistas from intrusion by power poles.

**Relevance:** *The Project would include a solar photovoltaic and battery energy storage system, an electrical substation, switchyard and related interconnection facilities. The visual assessment conducted for the Project concluded that the Project would not block views of Mauna Kahālāwai, Haleakalā, the Pacific Ocean, or other scenic views and vistas, nor significantly affect scenic resources along Maui’s scenic roadway corridors. The majority of the electrical lines associated with the project would be installed underground, with the exception of a few short overhead electrical spans where trenching is restricted by existing utilities or onsite gulches, as well as the interconnection lines extending to the POI with Maui Electric’s grid. The extent of overhead lines has been minimized to the extent practicable; furthermore, the new poles associated with these lines would be located at a distance from publicly accessible locations, thus minimizing visibility. As shown on the visual simulations (Appendix O), the poles and associated lines would not significantly intrude on views from surrounding locations, such that the Project would be consistent with the objective and policies in the Maui Island Plan related to reducing the impact of development projects on scenic resources.*

**Natural Hazards**

The goals, objectives, and policies related to natural hazards that are relevant to the Project are discussed below.

**Goal 3.1: Maui will be disaster resilient.**

**Objective 3.1.2 Greater protection of life and property.**

Policy 3.1.2.d Encourage the use of construction techniques that reduce the potential for damage from natural hazards.

Policy 3.1.2.f Increase food and energy security through local production and storage.

**Relevance:** *As discussed in Section 6.3.1, the Project site is not within the tsunami evacuation or sea-level rise inundation zone. The Project has also been sited to avoid flood hazard areas, with the exception of*

*the overhead electrical lines needed to interconnect with Maui Electric’s existing grid. To minimize the potential for wildfire as a result of Project implementation as well as the spread of wildfire from surrounding areas, the Project would incorporate multiple layers of fire prevention measures, including an emergency management system, rapid shutdown mechanisms, a fire detection and suppression system, non-vegetated fire breaks, and vegetation management program. Overall, the Project would contribute to Maui’s energy security by providing 40 MW of locally sourced renewable energy and 160 MWh of battery storage. Furthermore, AES would partner with a local agricultural entity to implement compatible agricultural activities such as sheep production and beekeeping within the Project site, thus providing meaningful agricultural output for local consumption. As such, the Project would comply with the stated objective and policies to protect life and property as related to both increased resilience to natural hazards and greater food and energy security.*

### **Economic Development**

The discussion of economic development relates to economic diversification, tourism, agriculture, emerging sectors, small business development, health care, and education and workforce development. The goals, objectives, and policies that are relevant to the Project are discussed below.

**Goal 4.1: Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island’s unique natural and cultural resources.**

**Objective 4.1.1 A more diversified economy.**

Policy 4.1.1.b Support the creation of new jobs and industries that provide a living wage.

***Relevance:** The Project would be part of the growing renewable energy industry in Hawai’i, helping to both diversify Maui’s economy and provide well-paying job opportunities to residents. In total, over its lifetime (including pre-development, operations, and decommissioning), the Project is expected to generate or sustain approximately 1,541 total jobs in Hawai’i, with approximately \$89.6 million in labor income, and total economic output of approximately \$251.9 million. As the Project would generate a substantial number of well-paying jobs and significant economic output, it would be consistent with the Maui Island Plan’s objective and policies related to economic diversification.*

**Objective 4.1.2 Increase activities that support principles of sustainability.**

Policy 4.1.2.a Support industries that are sustainable, and culturally and environmentally sensitive.

Policy 4.1.2.c Substitute imports with locally-produced services and products where practicable

***Relevance:** The Project would contribute to the renewable energy industry through construction and operation of a facility that generates solar energy with minimal adverse effects on natural and cultural resources. The solar energy produced by the Project would replace a portion of electricity that is currently generated by burning imported fossil fuels. As it would provide locally-produced energy with minimal*

*environmental impacts, the Project would be consistent with the objectives and policies of the Maui Island Plan related to sustainable economic development.*

**Goal 4.3: Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity.**

**Objective 4.3.2 Maintain or increase agriculture’s share of the total island economy.**

Policy 4.3.2.c Encourage the continued viability of sugar cane production, or other agricultural crops, in central Maui and all of Maui Island.

**Relevance:** *As discussed in Section 3.4, the Project site consists of agricultural lands that were historically part of the HC&S sugarcane plantation but have been fallow since 2016. In addition to producing clean renewable energy, the Project would reintroduce agricultural production to the site with a commitment to compatible agricultural activities for the duration of Project operations. The renewable energy facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities across the remainder of the Project site. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Preliminary estimates from the potential compatible agricultural operator indicate that approximately 5,000 pounds of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established. The Project would not impair agricultural productivity on the surrounding lands and would provide valuable revenue to help support Mahi Pono’s overall diversified agricultural operation. Upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses within the Project site. As such, the Project is not expected to conflict with the stated objective and policy related to maintaining the role of agriculture in the island’s economy.*

**Goal 4.4: A diverse array of emerging economic sectors.**

**Objective 4.4.1 Support increased investment and expanded activity in emerging industries.**

Policy 4.4.1.b Attract and assist industries to compete in high technology activities such as those related to renewable energy, green technologies, diversified agriculture, ocean sciences, health sciences, space technologies, and other knowledge-based industries.

**Relevance:** *The Project represents a significant investment in both renewable energy and diversified agriculture on Maui. It would help to meet the island’s need for renewable energy by providing up to 40 MW of solar energy and 160 MWh of battery storage. The energy produced by the Project would provide electricity for the equivalent of approximately 18,425 homes annually (based on average energy use) and would help to replace lost generation capacity associated with the impending retirement of the Kahului and Mā’alaea power plants. It would also support and subsidize compatible agricultural activities such as*

sheep production and beekeeping in partnership with local agricultural partners. Specific resources committed to local agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Furthermore, the Project would support Mahi Pono's efforts related to diversified and local food production by providing a valuable source of revenue for their operations. Development and construction of the Project is expected to generate or sustain approximately 1,541 total jobs in Hawai'i and generate total economic output of approximately \$251.9 million. As such, it would be consistent with the objective and policies in the Maui Island Plan related to increased investment in emerging industries.

**Objective 4.4.2 Increase the development of renewable energy technologies that are supported by the local community.**

Policy 4.4.2.a Support the expansion of the renewable energy sector and the use of solar, wind, wave, and biofuel technologies.

Policy 4.4.2.c Ensure an adequate supply of land and facilitate permitting to meet the needs for renewable energy technologies such as solar, wind, wave, biofuel, and other technologies, provided that environmental, view plane, and cultural impacts are addressed.

**Relevance:** As previously described, the Project would be part of the growing renewable energy industry on Maui, helping to both diversify the island's economy and provide valuable job opportunities to residents in an industry that is broadly supported by the community. It would generate and store electricity derived from solar resources, and would supply a meaningful portion of the island's energy needs. As demonstrated throughout this application, the potential effects on environmental, scenic, and cultural resources are expected to be limited, with impact avoidance and minimization measures implemented as part of the Project. For these reasons, the Project is expected to positively contribute to the stated objective and policies related to increasing development of renewable energy.

**Infrastructure and Public Facilities**

The discussion of infrastructure and public facilities relates to solid waste, wastewater, water, transportation, transit, parks, public facilities, schools and libraries, health care, energy, and harbors and airports. The objectives and policies related to energy are discussed below. As discussed throughout Section 3, the Project is not expected to require public infrastructure improvements nor would it burden existing infrastructure or public facilities, such that it would not conflict with the objectives or policies related to any of the other topic areas.

**Goal 6.10: Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation.**

**Objective 6.10.2** Increase the minimum percentage of electricity obtained from clean, renewable energy sources. By 2015, more than 15 percent of Maui’s electricity will be produced from locally-produced, clean, renewable energy sources, 25 percent by 2020, and 40 percent by 2030.

Policy 6.10.2.b Encourage the installation of renewable energy systems, where appropriate.

Policy 6.10.2.c Support the establishment of new renewable energy facilities at appropriate locations provided that environmental, view plane, and cultural impacts are addressed.

***Relevance:** The Project was selected by Hawaiian Electric through a competitive bidding process for projects to provide utility-scale renewable generation for their island-wide grid. It would help Maui meet its goal to increase electricity production from local, clean, renewable sources by providing up to 40 MW of solar energy and 160 MWh of battery storage, which is enough electricity to power the equivalent of approximately 18,425 homes on Maui (based on average energy use) and would supply a meaningful portion of the island’s energy needs. As discussed throughout this document, the Project would be located on fallow agricultural land that has been extensively disturbed by previous agricultural operations. An iterative siting and design process was used to avoid impacts to sensitive environmental features; measures to further avoid and minimize impacts to natural, scenic and cultural resources would be implemented as part of the Project. As the Project would involve installation of a renewable energy system that is well-sited with minimal environmental impacts, it is directly responsive to the objective and policies of the Maui Island Plan related to renewable energy.*

**Objective 6.10.3** Increased use of clean, renewable energy.

Policy 6.10.3.d Encourage import substitution by MECO and the broader community to become more self-sufficient in energy production.

Implementing Actions:

6.10.4-Action 1 Avoid the use of power poles where possible for new construction.

6.10.4-Action 2 Underground existing power transmission and distribution systems wherever possible or feasible when upgrades or new systems are needed.

***Relevance:** By producing up to 40 MW of solar energy along with 160 MWh of battery storage, the Project would supply a meaningful portion of the island’s energy needs, thus replacing electricity that is currently generated by Maui Electric using imported fossil fuels. The majority of the electrical lines for the Project would be installed underground; new overhead poles and lines would be limited to a few short spans where underground trenching is restricted by existing utilities or onsite gulches as well as for interconnection with Maui Electric’s existing grid. As the Project would involve installation of a renewable energy system that would increase Maui’s energy security, with a limited number of new poles and overhead lines, it is directly responsive to the objective and policies of the Maui Island Plan related to renewable energy.*

## Land Use

The goal related to land use, specific to agricultural lands, is that Maui will have a prosperous agricultural industry and will protect agricultural lands. The goals, objectives, and policies that are relevant to the Project are as follows.

### **Goal 7.1: Maui will have a prosperous agricultural industry and will protect agricultural lands.**

#### **Objective 7.1.1 Significantly reduce the loss of productive agricultural lands.**

Policy 7.1.1.f Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present.

***Relevance:** As previously described, the Project site is within a 27,102-acre area that was formerly part of an extensive sugarcane plantation and was designated as IAL in 2009. The land within the Project site is not currently used for agricultural purposes and has been fallow and unused since sugarcane cultivation ceased in 2016. As a solar energy facility, the Project is permitted in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP. In an effort to balance Maui's renewable energy and diversified agricultural needs, the Project would incorporate compatible agricultural activities within the Project site, exceeding the statutory requirements for solar projects on agricultural land. The Project facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities across the remaining area. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. The Project would not permanently convert lands to rural or urban use; upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses within the Project site. As such, it is expected that the Project would be consistent with the Maui Island Plan's land use objective and policies.*

## **Directed Growth Plan**

A key element of the Maui Island Plan is the establishment of a Directed Growth Strategy, which prescribes areas for future growth as well as protection from development. The Project is located in an area that is designated by the Maui Island Plan as outside the directed growth boundaries for urban, small town, and rural areas (Map C4). As explicitly stated in the plan, alternative energy systems may be suitable outside of urban, small town, and rural growth boundaries when consistent with community plans and zoning. As discussed in Sections 10.2.1.3 and 10.2.2, the Project would be consistent with the Kīhei-Mākena Community Plan and Maui's Comprehensive Zoning Ordinance.

In addition to identifying areas for future growth, the Directed Growth Plan also identifies protected areas to promote the protection and availability of passive and active recreational amenities and other environmentally sensitive areas; these include preservation areas, regional parks, greenways, greenbelts, and sensitive lands. The Project would affect the Keālia Pond National Wildlife Refuge Protected Area. The Maui Island Plan specifies the following items to ensure preservation and enhancement of the Keālia Pond National Wildlife Refuge Protected Area:

- 1) Optimize habitat size to accommodate seasonal flooding and a healthy wetland floodplain by constructing the Mā`alaea-Keālia bypass highway and reclassifying the existing Highway 30 as a scenic roadway;*
- 2) Develop a master plan for recreational coastal access along North Kīhei Road;*
- 3) Strategically locate managed access points to the refuge to include viewing stations, visual aids, and educational opportunities for visitors;*
- 4) Provide safe vehicular access to the site and nearby shoreline resources; and*
- 5) Maintain or construct drift fencing to promote beach stabilization and nourishment. The refuge shall be developed based on best management practices intended for wetland bird sanctuaries.*

The Project would not affect the identified actions to preserve and enhance the refuge. As detailed throughout this document, the Project would incorporate BMPs to avoid and minimize impacts to the surrounding environment, specifically including measures related to biological resources and water quality, such that no impacts to the Keālia Pond National Wildlife Refuge Protected Area are anticipated. For these reasons, the Project is considered to be consistent with the Directed Growth Strategy.

#### 10.2.1.3 Kīhei-Mākena Community Plan

Maui County is divided into nine community plan regions, each governed by a community plan which is a strategic planning document that guides government action and decision-making. Each community plan sets forth goals, objectives, and policies that are specific to the specific plan region. Additionally, the plan sets forth the desired land use patterns, goals, objectives, policies, and implementing actions for a number of functional areas, including economic activity, land use, environment, cultural resources, urban design and housing, physical and social infrastructure, and government. The Project site is located entirely within the boundaries of the area addressed by the Kīhei-Mākena Community Plan (County of Maui 1998).<sup>53</sup>

The Kīhei-Mākena Community Plan focuses on three central planning themes, which provide the foundation for the functional areas addressed by the plan: provision of needed public facilities and infrastructure, preservation and enhancement of significant natural resources, and the enhancement of neighborhoods (County of Maui 1998). The plan articulates goals, objectives, policies and implementing actions for the following subject areas: (1) land use, (2) environment, (3) cultural resources, (4)

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<sup>53</sup> An update to the Kīhei-Mākena Community Plan (County of Maui 1998) is currently in progress. Anticipating plan adoption, this application addresses consistency with both the current Kīhei-Mākena Community Plan as well as the Draft South Maui Community Plan (dated May 2025; County of Maui 2025a); refer to Section 10.2.1.4.

economic activity, (5) housing and urban design, (6) physical and social infrastructure, (7) government, and (8) indigenous architecture. Of these, the goals and objectives most relevant to the Project are those related to land use, environment, cultural resources, economic activity, and a subset of the physical and social infrastructure topics. The Project is expected to be consistent with objectives and policies related to these topics, as described below.

### **Land Use**

**Goal: A well-planned community with land use and development patterns designed to achieve the efficient and timely provision of infrastructural and community needs while preserving and enhancing the unique character of Mā'alaea, Kīhei, Wailea and Mākena as well as the region's natural environment, marine resources and traditional shoreline uses.**

#### **Objectives and Policies:**

- p. Prevent urbanization of important agricultural lands.

*Relevance: As previously described, the Project site is within a 27,102-acre area that was formerly part of an extensive sugarcane plantation and was designated as IAL in 2009. The land within the Project site is not currently used for agricultural purposes and has been fallow and unused since sugarcane cultivation ceased in 2016. As a solar energy facility, the Project is permitted in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP. In an effort to balance Maui's renewable energy and diversified agricultural needs, the Project would incorporate compatible agricultural activities within the Project site, exceeding the statutory requirements for solar projects on agricultural land. The Project facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities across the remaining area. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. The Project would not convert any land to urban use; upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses within the Project site. As such, it is expected that the Project would be consistent with the Kīhei-Mākena Community Plan's land use objective related to maintaining important agricultural lands.*

- r. Allow special permits in the State Agricultural Districts to accommodate unusual yet reasonable uses including: (1) limited agriculturally related commercial, public and quasi-public uses serving the immediate community; (2) uses clearly accessory or subordinate to a principal agricultural use on the property; (3) public facility uses such as utility installations or landfills whose location depends on technical considerations; and (4) extractive industries, such as quarrying, where the operation would not adversely affect the environment or surrounding agricultural uses.

**Relevance:** *The Project involves construction and operation of a solar energy facility, which is a type of utility installation that provides clean, renewable energy for the island-wide grid. The proposed location is highly suitable for solar energy generation based on its proximity to the existing Maui Electric grid infrastructure, distance from nearby homes and communities, site accessibility, and relatively flat topography, all of which help to minimize the need for additional infrastructure and overall impact to surrounding areas. Furthermore, the existing Maui Electric 69kV transmission lines that traverse this area were specifically identified by Hawaiian Electric in their Stage 3 RFP as some of the only grid facilities across the island with sufficient capacity to accommodate a utility-scale renewable energy project. Solar energy facilities are permitted in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP and compliance with the relevant provisions related to compatible agriculture and decommissioning. As the Project addresses the provisions for a CSUP/SSP and is well-sited based on specific site characteristics and technical requirements, it is consistent with the community plan objective related to special permits in the state agricultural district.*

### **Environment**

**Goal: Preservation, protection, and enhancement of Kīhei-Mākena’s unique and fragile environmental resources.**

#### **Objectives and Policies:**

- e. Protect the quality of nearshore waters by ensuring that land-based discharges meet water quality standards. Continued monitoring of existing and future waste disposal systems is necessary to ensure their efficient operation. Programs should be implemented to reduce the reliance on injection wells for wastewater disposal.

**Relevance:** *As discussed in Section 6.3.1.1, the Project would incorporate site design strategies based on LID techniques to maintain hydrologic and hydraulic functions and reduce the potential for erosion within the Project site. The Project would also incorporate stormwater management measures during and post-construction to retain and treat stormwater within the Project site. A SWPPP as well as drainage and erosion control plans would be prepared prior to construction and would detail the BMPs to be implemented to prevent and minimize discharge of pollutants to downstream waters, including erosion prevention, sediment control, and good housekeeping measures. The BMPs to be implemented would also be detailed in an Erosion Control Plan, which would be submitted along with a drainage plan and report, as part of the application for a grading permit from the County of Maui pursuant to the requirements of MCC Chapter 20.08. Implementation of these measures would minimize the potential for discharge of sediment and other pollutants in stormwater runoff, such that significant water quality impacts to downstream waters are not anticipated. Accordingly, it is expected that the Project would be in compliance with the County of Maui’s rules relating to soil erosion and sedimentation control and storm drainage facilities, as well as the State’s water quality standards. For these reasons, the Project would be consistent with the community plan objective related to protection of water quality.*

- h. Encourage such land uses as would serve to reduce hazardous fire conditions in the developed community plan areas.

**Relevance:** *The Project would incorporate multiple layers of fire prevention and suppression measures to avoid and minimize the potential for wildfire as a result of Project implementation as well as the spread of wildfire from surrounding areas. In addition to complying with NFPA 1 and NEC requirements for fire prevention for utility-scale solar facilities, the Project would also be consistent with the Maui County Fire Code (MCC Chapter 16.04B), the South Maui Community Wildfire Protection Plan (HWMO 2024), the Maui County Multi-Hazard Mitigation Plan (MEMA 2025), and the State of Hawai‘i’s priorities and recommendations for enhancing wildfire readiness (FSRI 2025). A minimum 30-foot non-vegetated fire break would be installed around the perimeter of the Project site as well as the various electrical equipment. Vegetation management would occur along the overhead electrical collector lines to maintain a minimum 20-foot clearance. Vegetation within the remainder of the Project site would also be managed to control combustible materials, while still providing enough ground cover to prevent erosion and support compatible agricultural activities. In addition, a variety of safety features would be integrated into the Project design to facilitate monitoring and safe operation of the system, including mechanisms to allow for disconnection and rapid shutdown of the system, if needed. The battery systems would be fully contained within temperature-controlled, leak-proof steel enclosures equipped with fire-rated insulation, as well as temperature and smoke sensors and alarms, integrated monitoring and circuit protection, a self-contained thermal management system, an explosion prevention and mitigation system, and a fire detection and thermal runaway propagation protection system specifically designed for lithium-ion battery energy storage systems. Independent testing of the battery system would be conducted prior to commercial operation, and the battery energy storage design would achieve UL 9540 certification prior to commercial operation. For these reasons, the Project would conform to the community plan objective related to reduction of hazardous fire conditions.*

### **Cultural Resources**

**Goal: Identification, preservation, enhancement, and appropriate use of cultural resources, cultural practice, and historic sites that (a) provide a sense of history and define a sense of place for the Kīhei-Mākena region; and (b) preserve and protect native Hawaiian rights customarily and traditionally exercised for subsistence, cultural, and religious purposes in accordance with Article XII, Section 7, of the Hawai‘i State Constitution, and the Hawai‘i Supreme Court’s PASH opinion, 79 Haw. 425 (1995).**

#### **Objectives and Policies:**

- a. Identify, preserve, protect and restore significant historical and cultural sites.

**Relevance:** *An AIS was conducted for the Project and included background research, a 100 percent pedestrian inspection, and subsurface testing throughout the Project site. A total of four historic properties were identified, all of which are related to commercial agricultural activities. In a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation. An AMP will be submitted to SHPD; SHPD acceptance will be obtained prior to Project initiation.*

*In addition to the AIS, a CIA and Ka Pa‘akai Analysis were conducted to assess the potential effect of the Project on cultural beliefs, practices, and resources, including traditional cultural properties. This effort*

*included archival and background research, review of historic documents, and consultation with cultural practitioners, lineal descendants, Native Hawaiian organizations, agencies, and others with relevant knowledge. Through this process, it was found that valuable cultural resources and practices occur within Waikapū Ahupua‘a; however, no ongoing cultural practices or cultural resources were identified within the Project site. Based on recommendations received through the CIA process, the Project would incorporate measures to be implemented in the event previously unknown cultural resources are discovered.*

*Given the results of the AIS, CIA and Ka Pa‘akai Analysis, and with implementation of the recommended mitigation measures, the Project would be consistent with the community plan objective related to significant historical and cultural sites.*

**Implementing Actions:**

- b. Require development projects to identify all cultural resources located within or adjacent to the Project site, prior to application, as part of the County development review process. Further require that all proposed activity include recommendations to mitigate potential adverse impacts on cultural resources, including site avoidance, adequate buffer areas and interpretation. Particular attention should be directed toward the southern areas of the planning region.

***Relevance:** As described above, a CIA and Ka Pa‘akai Analysis were conducted to identify cultural beliefs, practices, and resources, as well as traditional cultural properties, that could be affected by the Project. Through this process, it was found that valuable cultural resources and practices occur within Waikapū Ahupua‘a; however, no ongoing cultural practices or cultural resources were identified within the Project site. Based on input obtained through this process, the Project would incorporate measures to be implemented in the event previously unknown cultural resources are discovered. Given the thorough analysis of cultural resources pursuant to applicable rules and guidelines, and with incorporation of recommended mitigation, the Project would be compliant with the implementing action in the community plan related to identification of cultural resources.*

**Economic Activity**

**Goal: A diversified and stable economic base which serves resident and visitor needs while providing long-term resident employment.**

**Objectives and Policies:**

- c. Encourage research, development, and use of alternate energy sources.

***Relevance:** By producing up to 40 MW of solar energy along with 160 MWh of battery storage, the Project would supply a meaningful portion of Maui Electric’s energy needs, thus replacing electricity that is currently generated by Maui Electric using imported fossil fuels. Furthermore, the Project would help to replace lost power generation resulting from the planned retirement of fossil fuel-fired generating units at the Kahului Power Plant and Mā‘alaea Power Plant. As such, it would help to achieve the objective related to use of alternate energy sources in the Kīhei-Mākena Community Plan.*

d. Establish balance between visitor industry employment and nonvisitor industry employment.

**Relevance:** *The Project would contribute to the growing renewable energy industry in Hawai'i, helping to both diversify Maui's economy and provide well-paying job opportunities to residents. In total, over its lifetime (including pre-development, operations, and decommissioning), the Project is expected to generate or sustain approximately 1,541 total jobs in Hawai'i, with approximately \$89.6 million in labor income, and total economic output of approximately \$251.9 million. As the Project would generate a substantial number of well-paying jobs and significant economic output in a nonvisitor industry, it would be consistent with the community plan goal and objective related to economic diversification and employment.*

e. Provide for the preservation and enhancement of important agricultural lands for a variety of agricultural activities, including sugar cane, diversified agriculture and aquaculture.

**Relevance:** *The Project site is within a 27,102-acre area that was formerly part of an extensive sugarcane plantation and was designated as IAL in 2009. The land within the Project site is not currently used for agricultural purposes and has been fallow and unused since sugarcane cultivation ceased in 2016. As a solar energy facility, the Project is permitted in both the state agricultural land use district and county agricultural zoning district with issuance of a CSUP/SSP. In an effort to balance Maui's renewable energy and diversified agricultural needs, the Project would incorporate compatible agricultural activities within the Project site, exceeding the statutory requirements for solar projects on agricultural land. The Project facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities across the remaining area. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Preliminary estimates from the potential compatible agricultural operator indicate that approximately 5,000 pounds of lamb and 2,500 pounds of honey could be produced within the Project site every year once agricultural operations are fully established. Furthermore, the Project would support Mahi Pono's efforts related to diversified and local food production by providing a valuable source of revenue for their operations. Upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses within the Project site. For these reasons, the Project would be consistent with the Kīhei-Mākena Community Plan objective related to important agricultural lands.*

### **Physical and Social Infrastructure**

**Goal: Provision of facility systems, public services and capital improvement projects in an efficient, reliable, cost effective, and environmentally sensitive manner which accommodates the needs of the Kīhei-Mākena community, and fully support present and planned land uses, especially in the case of project district implementation.**

**Objectives and Policies (Drainage):**

- a. Design drainage systems that protect coastal water quality by incorporating best management practices to remove pollutants from runoff. Construct and maintain, as needed, sediment retention basins and other best management practices to remove sediments and other pollutants from runoff.

**Relevance:** *As described in Section 3.5, the Project would incorporate BMPs to avoid and minimize potential impacts to the surrounding environment, particularly measures designed to eliminate and minimize the potential discharge of pollutants to downstream waters. The BMPs to be implemented would be determined in accordance with applicable regulatory requirements, including those associated with the NPDES program and MCC Chapter 20.08 (Soil Erosion and Sedimentation Control), which require approval of a SWPPP and Drainage and Erosion Control Plan prior to construction, respectively. Specific BMPs would address erosion prevention, sediment control, and good housekeeping. No ground disturbing activities would occur until BMPs have been properly implemented. As such, the Project would be compliant with the community plan objective related to minimizing pollutants in runoff.*

- d. Minimize the increase in discharge of storm water runoff to coastal waters by preserving flood storage capacity in low-lying areas, and encouraging infiltration of runoff.

**Relevance:** *The Project would incorporate site design strategies based on LID techniques to maintain hydrologic and hydraulic functions and reduce erosion within the Project site. The majority of the Project site, including the area beneath the solar modules, would require minimal grading such that the existing drainage patterns would not be altered and would remain as a natural, pervious surface, thus maintaining the ability to absorb and infiltrate stormwater. A series of drainage basins would be installed to capture and treat stormwater in areas with increased impervious surfaces associated with the Project facilities. These features would be designed to retain and allow for infiltration or evapotranspiration of stormwater, as needed to reduce peak flows to pre-development levels. The size and design of the features would be based on site-specific conditions as well as the requirements of the County of Maui's Rules for the Design of Storm Water Treatment Best Management Practices and Rules for the Design of Storm Drainage Facilities (Maui County Administrative Rules Sections 15-111 and 15-04). As such, the Project would be in compliance with the community plan objective related to minimizing discharge and encouraging infiltration of stormwater runoff.*

**Objectives and Policies (Energy and Public Utilities):**

- d. Promote environmentally and culturally sensitive use of renewable energy resources like biomass, solar, wind, and hydroelectric energy in all sectors of the community.

**Relevance:** *The Project entails construction and operation of 40 MW of solar energy generation with 160 MWh of battery storage—a renewable source of clean energy for Maui's island-wide grid. The Project would supply a meaningful portion of Maui's energy needs and would offset the use of imported fossil fuels over the Project's lifetime. The Project has been sited and designed to minimize environmental and cultural impacts, representing an environmentally sensitive development of locally-produced renewable*

energy resources. As such, the Project would comply with the objective of the Kīhei-Mākena Community Plan related to renewable energy.

- h. Require proper site selection, facility construction and monitoring of power generation facilities in order to minimize adverse environmental impacts upon the Kīhei-Mākena community.

**Relevance:** *The Project facilities would be sited on fallow land that has been extensively modified by previous agricultural operations and is dominated by non-native species. Other site characteristics that make this area highly suitable for generation of solar energy include proximity to the existing Maui Electric grid infrastructure, distance from nearby homes and communities, site accessibility, and relatively flat topography, all of which help to minimize the need for additional infrastructure and ground disturbance. Furthermore, the existing Maui Electric 69kV transmission lines that traverse this area were specifically identified by Hawaiian Electric in their Stage 3 RFP as some of the only grid facilities across the island with sufficient capacity to accommodate a utility-scale renewable energy project. Working within the area provided by the landowner for renewable energy, AES proactively engaged in an iterative siting and design process to further minimize potential impacts to the surrounding environment and nearby communities, including a setback from Waikapū Stream, a protective buffer around Pale‘a‘ahu Gulch and Pōhākea Gulch, and avoidance of other sensitive environmental areas such as flood hazard zones. Project siting efforts also sought to minimize visibility of Project equipment from nearby roadways and other publicly accessible locations, resulting in an increased setback from Kūihelani Highway and North Kīhei Road. For these reasons, the Project would be consistent with the community plan objective related to proper site selection.*

### **Planning Standards**

The Kīhei-Mākena Community Plan also establishes planning standards, which are specific guidelines that clarify the intent of the land use and urban design objectives and policies; these include land use standards, project district standards, and urban design standards. In general, none of these standards apply to the Project site, except for the requirement that all zoning applications and/or proposed land uses and developments be consistent with the land use map and objectives and policies of the community plan.

As shown on the land use map, the Project would be within an area designated for Agriculture and Project District 11 (Mā‘alaea Village), with a small inclusion of Open Space along the southern boundary (see Figure 11; County of Maui 1998). The Project would be consistent with these designations as follows:

- **Agriculture:** This designation indicates areas intended “for agricultural activity which would be in keeping with the economic base of the County and the requirements and procedures of Chapter 205 HRS, as amended.” As detailed in Section 10.1.2, the Project addresses the required provisions related to compatible agriculture and decommissioning, and with issuance of an SSP, would comply with the requirements and procedures of HRS Chapter 205.

- **Project District 11 (Mā‘alaea Village):** This designation is for a master planned residential community with single and multi-family housing types and community amenities including a golf course, community center, village center with commercial services, community park, pedestrian/bicycle paths, and buffer. The community plan specifies that each project district is to be implemented through a separate ordinance; to date, no ordinance has been passed for Project District 11.
- **Open Space:** This designation is intended to “limit development on certain urban and non-urban designated lands which may be inappropriate for intensive development due to environmental, physical, or scenic constraints; this category would include but not be limited to shoreline buffer areas, landscape buffers, drainageways, view planes, flood plains, and tsunami areas. Other appropriate urban and non-urban uses may be allowed on a permit basis.” None of the solar photovoltaic, energy storage, or substation/switchyard components would be in the area designated as Open Space; only the proposed interconnection lines would be located along the edge of this area, as needed to interconnect with the existing Maui Electric 69kV transmission lines. The interconnection lines would not result in intensive development nor would they significantly affect any environmental, physical, or scenic attributes of the area designated as Open Space.

With respect to the project district standards, the community plan states that designated project districts are to be implemented through a separate ordinance which specifies the permitted uses, densities, design guidelines and other information necessary to attain the project district and community plan objectives. As described above, a portion of the Project site falls within Project District 11; no ordinance has been implemented for this project district such that the Project is not subject to project district standards.

#### 10.2.1.4 Draft South Maui Community Plan

MCC Chapter 2.80B requires that the community plans be updated every 10 years; Resolution No. 13-13 adopted by the Maui County Council in 2013 established the order in which the plans would be updated (County of Maui 2013). The update process for the Kīhei-Mākena Community Plan was initiated in 2020, and through this process, was renamed as the South Maui Community Plan. The update process is currently in its final phase: Phase VI, Maui County Council Approval (County of Maui 2025b). Based on the overall timeline, adoption of the updated plan is anticipated to occur after submittal of this permit application. However, anticipating plan adoption, this application addresses consistency of the Project with the goals, objectives, and policies of the draft updated plan (dated May 2025).

The draft South Maui Community Plan focuses on identifying the interconnections between the natural and human-made systems, structures, and services that are the foundation of the South Maui Community (County of Maui 2025a). The plan articulates goals that identify specific desired outcomes through policies and actions. There are five general goals that cover the following topics: (2.1) transportation network, (2.2) healthy community, (2.3) resilient systems, (2.4) watershed management,

and (2.5) historic preservation. The Project is expected to be consistent with the objectives and policies related to each of these topics, as described below.

**Goal 2.1: A complete, balanced, efficient and connected transportation network**

Policy 2.1.15 Encourage coordination of the timing of roadway improvements, whether private or public, so that concurrent roadway closures and traffic disruptions are minimized.

**Discussion:** As discussed in Section 7.4, the Project would not require substantive changes to any intersections, nor would it involve construction or improvements within the rights-of-way for any state or county roadway, including Kūihelani Highway, Maui Veterans Highway or North Kihei Road. Furthermore, the results of a TIAR indicate that the Project would not significantly impact the overall level of service at the intersections associated with the proposed access points to the Project site. Prior to construction, if requested by the relevant agencies, a TMP would be prepared and would detail the measures that would be implemented to avoid, minimize and mitigate potential impacts to the surrounding roadway network based on Complete Streets principles. For these reasons, the Project is not expected to result in substantial traffic disruptions, such that it would be in compliance with the draft plan policy related to roadways.

**Goal 2.2: Safe, healthy, livable communities for all**

Policy 2.2.29 Promote the placement of utilities underground in new areas of development and in existing areas where possible, to minimize the impacts from fires, high winds and other storm events and protect native birds and scenic resources. Minimize ground disturbance in culturally sensitive areas.

**Relevance:** *As detailed in Section 3, the majority of the electrical lines required for the Project would be installed underground; new overhead poles and lines would be limited to a few short spans where underground trenching is restricted by existing utilities or onsite gulches as well as for interconnection with Maui Electric’s existing grid. Based on the due diligence studies conducted for the Project, there are no ongoing cultural practices or cultural resources known to occur within the Project site. As the Project would primarily involve underground lines and would not disturb any culturally sensitive areas, it is directly responsive to the policy of the draft South Maui Community Plan related to installation of underground utilities.*

Policy 2.2.42 In new development and redevelopment projects, outdoor lighting shall be designed to provide the minimum illumination as required by ordinance to respond to human needs, protect native species, and preserve the dark skies.

**Relevance:** *The Project would not involve any nighttime lighting, thus helping to protect “night sky” resources; all proposed lighting would adhere to the standards of MCC Chapter 20.35.060. As such, the Project would comply with the draft plan policy related to outdoor lighting.*

Policy 2.2.44 Encourage all electric transmission lines and substations to be located over cleared areas, graveled, and regularly maintained by HECO to prevent sparks from igniting nearby vegetation.

**Relevance:** *As described in Section 3.3, all equipment within the Project substation and switchyard would be underlaid with gravel with a minimum 30-foot non-vegetated fire break installed around the perimeter; all overhead electrical line corridors would be cleared as needed to provide adequate clearance from nearby vegetation. Following construction, ownership of the switchyard and interconnection lines would be transferred to Maui Electric, along with responsibility for all associated operations and maintenance activities. Maintenance would be conducted in accordance with applicable PUC and other regulatory requirements as well as Hawaiian Electric system-wide standards, including their expanded Wildfire Safety Strategy (Hawaiian Electric 2025). For these reasons, the Project is expected to be consistent with the draft plan policy related to electrical transmission lines and substations.*

Policy 2.2.45 Encourage all existing wood power poles to be replaced with metal and encourage metal poles for all new power poles installed.

**Relevance:** *The majority of the electrical lines associated with the Project would be installed underground; overhead electrical lines would be limited to those required for interconnection with Maui Electric's existing 69kV transmission system as well as a few short segments of overhead electrical collector lines. The poles to support the interconnection line would be steel monopole structures, thereby complying with the draft plan policy related to new power poles. The segments of overhead electrical collector lines would require up to six new poles; these would be wooden pole structures would be treated for fire and decay resistance and designed to strict safety standards, including grounding and shield wires, as well as protective relaying systems to shut off power if a fault is detected. Wooden poles have a lifespan that exceeds the Project duration and would be removed as part of decommissioning, and would enable lower construction impact opportunities compared to steel structures.*

Policy 2.2.46 Encourage utilities to be powered off when winds reach high speeds.

**Relevance:** *Following construction, ownership of the switchyard and interconnection lines would be transferred to Maui Electric, along with responsibility for all associated operations and maintenance activities. These facilities would be operated and maintained in accordance with applicable PUC and other regulatory requirements as well as Hawaiian Electric system-wide standards, including their expanded Wildfire Safety Strategy (Hawaiian Electric 2025). Applicable protocols for powering off electrical utilities during high wind events would be implemented in accordance with these requirements. As such, the Project is expected to be consistent with the draft plan policy related to utilities.*

### **Goal 2.3: Ready and resilient systems**

Climate Change and Sea Level Rise

Policy 2.3.8 Avoid development or redevelopment within Special Flood Hazard Areas (SFHA).

**Relevance:** *The solar modules, battery energy storage equipment, and substation/switchyard facilities have been specifically sited to avoid any special flood hazard areas; these facilities would be located entirely within a low to moderate risk flood zone, designated by FEMA as Zone X (those areas determined to be outside the 0.2-percent annual chance floodplain). Given the location of Maui Electric’s existing 69kV electrical transmission lines, the interconnection lines for the Project would traverse an area designated by FEMA as Zone A (those areas with a one percent annual chance for flooding; DLNR 2024). The lines and supporting poles would be designed to comply with applicable codes and Maui Electric standards, including sufficient scour (erosion) and flood tolerant embedment depths and foundations, and therefore would not be susceptible to flooding nor contribute to increased flood risk. As such, the Project is not expected to conflict with the draft community plan policy related to development within special flood hazard areas.*

- Policy 2.3.9 Support expansion of community-supported renewable energy deployment, including small-scale community options and decentralized energy systems, all of which include plans for maintenance and disposal that do not burden County landfills and decommissioning at the end of the project’s intended use as well as safeguarding our endangered flora and fauna.

**Relevance:** *The Project would involve construction and operation of a solar photovoltaic and battery energy storage system, which is a widely supported form of renewable energy by the community. The solar energy from the Project would be deployed for use across Maui’s island-wide electrical grid and would replace a portion of electricity that is currently generated by burning fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to the environment and human health. Furthermore, the Project’s fixed-price PPA offers a stable and predictable cost for energy over the long term, helping to hedge against future price volatility associated with fossil fuel-based power. The Project would also help to meet the specific needs of Maui Electric’s island-wide electrical system by providing dispatchable stored solar energy, thus offsetting night-time fossil fuel generation, improving grid stabilization, and replacing lost generation capacity associated with the impending retirement of the Kahului and Mā’alaea power plants. The Project incorporates plans for operations and maintenance activities (Section 3.6), decommissioning at the end of its useful life (Section 3.7) and the safeguarding of endangered flora and fauna (Section 6.3.1.6). As such, the Project would be consistent with the draft plan policy related to renewable energy.*

#### Fire and Emergency Management

- Policy 2.3.12 Require all development to incorporate defensible space around its perimeter and provide ongoing maintenance as per recommendations of the Maui Fire Department. The use of green firebreaks with fire resistant native plants will be encouraged to increase biodiversity and reduce erosion.

**Relevance:** *The Project would include multiple layers of fire protection and suppression measures, including a minimum 30-foot non-vegetated fire break installed around the perimeter of all electrical equipment. Vegetation within the remainder of the Project site would be managed to control*

*combustible materials, while still providing enough ground cover to prevent erosion and support compatible agricultural activities. The Maui County Department of Fire and Public Safety will be consulted through the Project development process, with review and approval of design drawings prior to construction, on-site training and orientation offered prior to commercial operation, and annual meetings offered throughout the operational phase. As such, the Project is consistent with the draft South Maui Community Plan policies related to fire and emergency management.*

Policy 2.3.14 Consult and apply the goals, objectives and actions of the South Maui Community Wildfire Protection Plan and the Maui County Multi-Hazard Mitigation Plan.

**Relevance:** *The Project would include multiple layers of fire protection and suppression measures, as described in Section 3.3.8, which reflect the goals, objectives, and actions contained in the South Maui Community Wildfire Protection Plan and the Maui County Multi-Hazard Mitigation Plan Update. Therefore, the Project would be consistent with the draft plan policies related to fire and emergency management.*

#### Water

Policy 2.3.18 Current and future development must adhere to and be consistent with the public trust doctrine, and the State Water Codes which includes the Maui Island Water Use and Development Plan (WUDP).

**Relevance:** *The Project site is currently comprised of fallow agricultural fields and no water is currently used onsite. Construction and operation of the Project would have minimal water requirements—generally only for dust control, vehicle washdown, and compatible agricultural uses (e.g., drinking water for sheep)—with water obtained from onsite tanks (filled using water trucks). As such, the Project would not conflict with the referenced water use policies.*

Policy 2.3.21 Prioritize the protection, preservation, and management of South Maui’s water sources, including aquifers, recharge areas, streams and springs.

**Relevance:** *The Project would not affect any aquifers, recharge areas or other groundwater features. In addition, as discussed in Section 3.2, the Project has been proactively sited and designed to avoid surface water features. In particular, the Project was sited to be set back from Waikapū Stream by a minimum of 650 feet, as well as to include a protective buffer around Pale’ā’ahu Gulch and Pōhākea Gulch. In addition, BMPs would be implemented to address potential indirect impacts to water quality in these features. Given the various efforts to avoid and minimize impacts to surface water features, the Project is expected to comply with the draft South Maui Community Plan policy related to protection of water sources.*

#### Wastewater

Policy 2.3.22 New developments in South Maui, including projects developed under Chapter 201H, Hawai’i Revised Statutes, and Chapter 2.96 and 2.97, MCC, must connect to County or private recycled water distribution systems when available; if recycled water infrastructure is not readily available, developments shall be designed to allow for future connections.

**Relevance:** *The Project site is not within the county’s wastewater service area (County of Maui 2012; Map 6-1). The Project would not generate any sewage or sanitary wastewater. As operation of the facilities would not require full-time, on-site staff, no permanent sanitary wastewater system would be required. Portable sanitation units would be brought onsite for construction and would be maintained for operation and maintenance staff as needed. As such, the Project is expected to be consistent with the draft plan policy related to wastewater.*

#### **Goal 2.4: Mauka to makai watershed management**

Policy 2.4.1      Preserve wetlands with buffers adequate to mitigate pollutants, support ecosystem functions, allow for migration, and incorporate future sea level rise scenarios.

**Relevance:** *Streams, wetlands, and other surface water features within and directly adjacent to the Project study area were initially identified based on available datasets (including NHD, NWI, and DAR) and further evaluated through a field delineation effort. Based on the results of these efforts, no wetlands are known to occur within or directly adjacent to the Project site. The only surface water features identified within or adjacent to the Project site are Waikapū Stream, Pale’a’ahu Gulch, and Pōhākea Gulch. As detailed in Section 3.2, the Project has been proactively sited and designed to avoid and minimize impacts to these features, including a minimum 650-foot setback from Waikapū Stream as well as a 200-foot buffer along Pale’a’ahu Gulch, and Pōhākea Gulch. None of the solar photovoltaic, energy storage, or substation/ switchyard components would be located within this buffer. Additionally, no improvements would be made to any of the existing roads within 200 feet of these gulches. A limited amount of work would occur within the buffer for Pōhākea Gulch and Pale’a’ahu Gulch to interconnect the Project via the designated GCPs identified by Maui Electric, as well as to install two overhead spans of medium-voltage electrical collector lines. However, this work has been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; no ground disturbance would occur within the gulch boundaries, and the poles and associated work pads would be located a minimum of 50 feet from the gulch. As the Project incorporates protective buffers and would not involve any work within any surface water features, it would be consistent with the draft plan policy related to preserving wetlands.*

Policy 2.4.2      Prioritize “nature-based solutions”, low-impact design and green infrastructure strategies (rather than “gray” infrastructure) to manage flooding and prevent surface water pollutants from flowing into streams and reaching the ocean.

**Relevance:** *The Project has been designed to minimize ground disturbance and maintain ample, natural open space surrounding the facilities; a relatively small area of new impervious surfaces (no more than 12.8 acres) would be added to the Project site. In addition, LID design techniques have been incorporated to maintain permeability throughout the Project site as well as minimize the potential for erosion. The Project would also incorporate stormwater retention BMPs during and post-construction to retain and treat stormwater within the Project site. A SWPPP as well as drainage and erosion control plans would be prepared prior to construction and would detail the BMPs to be implemented to prevent and minimize*

*discharge of pollutants to downstream waters, including erosion prevention, sediment control, and good housekeeping measures. Based on these efforts, the Project would be in compliance with the County of Maui's rules relating to soil erosion and sedimentation control and storm drainage facilities, as well as the State's water quality standards. As such, the Project would be consistent with the draft plan policy relating to preventing pollutants from flowing into streams and reaching the ocean.*

Policy 2.4.6 For new developments and subdivisions, gulches and drainageways as identified in the map in Figure 3.18 (pg. 105) of this Plan must remain in open space, and no new permanent structures may be developed in or within 100 feet of the top of the bank of identified gulches and drainageways (with the exception of public bridge crossings and public utilities), including but not limited to Mā'alaea, Kanaio, Pōhākea, Waikapū, Waiakoa, Kūlanihāko'i, Waipu'ilani, Waimāha'iha'i, Keōkea, Līlīoholo, Keawakapu, Wailea, Kama'ole, Palaua and Kapunakea gulches. The open space area must be identified on the final approved subdivision maps. Encourage maintenance of the open space area to the extent practicable.

**Relevance:** *As previously described, the Project was proactively sited to be set back a minimum of 650 feet from Waikapū Stream, as well as to incorporate a 200-foot buffer around the two gulches within the Project site – Pale'a'ahu Gulch and Pōhākea Gulch. None of the solar photovoltaic, energy storage, or substation/ switchyard components would be located within this buffer. Additionally, no improvements would be made to any of the existing access roads within 200 feet of these gulches. A limited amount of work would occur within the buffer for Pōhākea Gulch and Pale'a'ahu Gulch to interconnect the Project via the designated GCPs identified by Maui Electric, as well as to install two overhead spans of medium-voltage electrical collector lines. However, this work has been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; no ground disturbance would occur within the gulch boundaries, and the poles and associated work pads would be located a minimum of 50 feet from the gulch. As the Project incorporates a 200-foot buffer around the onsite gulches and work within the buffer would be limited to electrical utility lines, it would comply with the draft plan policy related to maintaining open space along gulches and drainageways.*

Policy 2.4.9 To support watershed management and protect water quality, redevelopment and new development must avoid, minimize or mitigate impacts to the existing surface and groundwater hydrology as appropriate to conditions. Wetlands, wetland buffers and recharge area conservation and restoration shall be prioritized.

**Relevance:** *The Project would not affect groundwater hydrology. As discussed in Section 3.2, the Project has been proactively sited and designed to avoid surface water features. In particular, the Project was sited to be set back from Waikapū Stream by a minimum of 650 feet, as well as to include a protective buffer around Pale'a'ahu Gulch and Pōhākea Gulch. Within the Project site, construction would result in localized topographic changes; however, existing drainage patterns would not be substantially altered. In addition to minimizing grading, the design incorporates other LID techniques to maintain hydrologic*

*and hydraulic functions and reduce the potential for erosion within the Project site, with site design strategies such as conservation of natural areas, including existing vegetation, and minimization of soil compaction. The Project would also implement stormwater management BMPs during and post-construction to retain and treat stormwater within the Project site. A SWPPP as well as drainage and erosion control plans would be prepared prior to construction and would detail the BMPs to be implemented to prevent and minimize discharge of pollutants to downstream waters, including erosion prevention, sediment control, and good housekeeping measures. For these reasons, the Project would be consistent with the draft plan policy related to avoidance of impacts to surface and groundwater hydrology as well as protection of water quality.*

Policy 2.4.14 Protect and preserve areas designated open space as important assets of the region. Habitat connectivity for native species, watersheds, undeveloped shoreline areas, wetlands, and other environmentally and culturally sensitive areas will be preserved.

**Relevance:** *The only portions of the Project site designated as open space are along Pale'a'ahu Gulch and Pōhākea Gulch. The Project has been designed to incorporate a 200-foot buffer around these onsite gulches; no Project equipment would be located within this buffer except for portions of the electrical interconnection lines (as needed to reach the GCPs identified by Maui Electric for interconnection to their grid). As such, the Project would not diminish open space characteristics, consistent with the draft plan policy.*

Policy 2.4.15 Require the implementation of low-impact development, green infrastructure, or permaculture design practices in developments in South Maui to reduce stormwater runoff and protect water quality. Require management of flows that are greater than the five-year storm and remove pollutants through low-impact design or permaculture design to retain, filter, and sink storm water as feasible on site.

**Relevance:** *The Project would incorporate site design strategies using LID techniques to maintain hydrologic and hydraulic functions within the Project site. Although the Project would increase the amount of impervious surface within the Project site, which can increase stormwater runoff, it is expected that impervious surfaces would increase by no more than 12.8 acres (or 2.5 percent of the overall 476.303-acre Project site). The remainder of the Project site would be maintained as a natural, pervious surface that is able to absorb and infiltrate stormwater. Vegetated areas temporarily disturbed by construction would be revegetated (either through regrowth of existing vegetation or with hydroseeding, as needed) such that erosion would not be expected to occur. To further minimize the potential for stormwater-related impacts, the Project would also incorporate stormwater retention BMPs during and post-construction to address stormwater within the Project site. These BMPs would include drainage basins installed along the downgradient edge of new impervious surfaces, which would be designed to detain and allow for infiltration or evapotranspiration of stormwater runoff generated by*

*the Project. For these reasons, the Project is expected to be consistent with the draft plan policy related to reduction of stormwater runoff and protection of water quality.*

**Goal 2.5: Responsible stewardship of wahi kūpuna and historic properties.**

Policy 2.5.1      Require development projects seeking county permits or exemptions to provide continued access to kuleana lands, and preserve and protect access to areas both mauka and makai for any lands where Native Hawaiian rights were customarily and traditionally exercised for subsistence (including fishing, hunting and gathering), cultural or religious purposes. Applicable laws include Section 7-1, Hawai'i Revised Statutes; Article XII, Section 7, of the Hawai'i State Constitution; and the Hawai'i Supreme Court's PASH opinion, 79 Haw. 425 (1995).

**Relevance:** *As discussed in Section 6.1.3, no traditional trails were identified within the Project study area. The nearest known feature is a traditional Hawaiian kerbstone trail remnant located approximately 1.1 mile west of the Project site. Similarly, no contemporary trails are located within or near the Project site. The nearest recreational trails identified by Na Ala Hele are the Lahaina Pali Trail, located approximately 1.1 mile west of the Project site, and Maui Motocross Track (Maui Raceway Park), located just east of Maui Veterans Highway approximately 1.8 miles from the Project site (see Figure 18; State of Hawai'i 2024). Two trails associated with the Keālia Pond National Wildlife Refuge – the Keālia Coastal Boardwalk and the Kanuimanu Dike Trail – are located approximately 0.6 miles and 1.2 miles southeast of the Project site, respectively (USFWS 2024). The nearest beach access points (providing access to Mā'alaea Beach) are located more than 0.6 miles from the Project site. As no trails or beach access points are located within the Project site, nor would the Project site block access to kuleana lands or other nearby areas, the Project would be consistent with the draft South Maui Community Plan policy related to continued access.*

Policy 2.5.2      Development projects shall engage in consultation with Native Hawaiian Organizations, and those who have genealogical ties, those with generational ties, cultural practitioners and knowledgeable individuals connected or associated with the project area and provide evidence of this engagement to the appropriate reviewing agency.

**Relevance:** *A CIA and Ka Pa'akai Analysis were conducted to assess the potential effect of the Project on cultural beliefs, practices, and resources, including traditional cultural properties. This effort included archival and background research, review of historic documents, and consultation with cultural practitioners, lineal descendants, Native Hawaiian organizations, agencies, and others with relevant knowledge. A copy of the CIA and Ka Pa'akai Analysis is attached to this permit application (Appendix L). Based on the process conducted for the CIA and Ka Pa'akai Analysis, the Project is in compliance with the draft plan policy related to cultural resource consultation.*

2.5.3              Identify, preserve, protect and restore wahi kūpuna and significant historic properties in South Maui.

**Relevance:** An AIS was conducted for the Project and included background research, a 100 percent pedestrian inspection, and subsurface testing throughout the Project site. A total of four historic properties were identified, all of which are related to commercial agricultural activities. In a letter dated September 18, 2025, SHPD accepted the AIS Report, issued an effect determination of “effect, with agreed upon mitigation commitments,” and concurred with the recommended mitigation. An AMP will be submitted to SHPD; SHPD acceptance will be obtained prior to Project initiation. As such, the Project is consistent with the draft plan policy related to wahi kūpuna and significant historic properties.

Policy 2.5.4 Protect dark skies, mauka and makai public view corridors and scenic vistas, including traditionally significant views and views to and from the shoreline.

**Relevance:** As discussed in Section 6.3.2, a detailed visual assessment, including photo-realistic simulations, was conducted to evaluate the extent to which Project components may be potentially visible and noticeable. The results of the assessment indicate that views of the Project would range from completely screened to partially screened to unobstructed depending on the viewing angle, distance, and extent of intervening structures, vegetation, and terrain. Where visible, Project components would appear as a sub-dominant to co-dominant features in the landscape setting. Given the low profile of the solar photovoltaic modules, the Project would not block views of Mauna Kahālāwai, Haleakalā, the Pacific Ocean, or other scenic views and vistas, nor significantly affect scenic resources along Maui’s scenic roadway corridors, including Honoapi’ilani Highway and North Kīhei Road. Furthermore, the Project would not involve nighttime lighting, thus helping to protect “night sky” resources. Considering these factors, the Project would be in compliance with the draft plan policy related to scenic resources.

Policy 2.5.11a When wahi kūpuna or other historic properties are located within a project area, require restoration or preservation of the site(s) and require mitigation of potential adverse impacts on cultural resources during construction, including site avoidance, adequate buffer areas and interpretation; particular attention should be directed toward the southern areas and shoreline of the planning region. Work shall be done in consultation with the State Historic Preservation Division, Maui County Archeologist, cultural practitioners, and Native Hawaiian Organizations.

**Relevance:** As described above, an AIS, CIA and Ka Pa’akai Analysis were conducted for the Project, including consultation with SHPD, relevant Native Hawaiian organizations, and cultural practitioners as appropriate. The AIS, which was accepted by SHPD in a letter dated September 18, 2025, identified a total of four historic properties, all of which are related to commercial agricultural activities. The CIA and Ka Pa’akai Analysis identified valuable cultural resources and practices within Waikapū Ahupua’a, but did not identify any ongoing cultural practices or cultural resources within the Project site. Based on the recommendations identified through the AIS and CIA consultation process, the Project would include archaeological monitoring and other measures that would be implemented in the event previously unknown cultural resources are discovered. An AMP will be submitted to SHPD and acceptance will be obtained prior to Project initiation. Given the conclusions of the CIA and AIS, and with implementation of

*an approved AMP and other recommended measures, the Project would be consistent with policies related to responsible stewardship of wahi kūpuna and historic properties.*

### **Community Plan Map and Growth Plan**

The Draft South Maui Community Plan also includes a community plan map to guide growth and preservation decisions based on community plan designations. The Project site falls within Subarea 2: North Kīhei, which is illustrated in Figure 3.4 of the Draft South Maui Community Plan. This figure indicates that the Project site is primarily classified as agricultural (AG) land use, with open space (OS) along Pale‘a‘ahu Gulch and Pōhākea Gulch; the Project site is not within the indicated growth boundaries (Figure 12). Consistency with the community plan map designations is discussed below.

- **Agricultural (AG):** The draft community plan explicitly identifies solar energy facilities as an appropriate use within this land use designation.
- **Open Space (OS):** According to the draft community plan, this land use designation is “intended to preserve and manage lands for Native Hawaiian traditional and customary uses, while protecting sensitive ecological resources, scenic resources, hazardous areas, drainage ways, and open space greenbelts and greenways. Open Space areas support natural processes such as flood management and erosion control.” The Project has been designed to incorporate a 200-foot buffer around Pale‘a‘ahu Gulch and Pōhākea Gulch, thus exceeding the extent indicated for the OS designated area on the community plan map (per Policy 2.4.6). No Project equipment would be located within the 200-foot buffer except for portions of the electrical interconnection lines (as needed to reach the GCPs identified by Maui Electric for interconnection to their grid). However, this work has been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; no ground disturbance would occur within the gulch boundaries, and the poles and associated work pads would be located a minimum of 50 feet from the gulch. As the Project incorporates a 200-foot buffer around the onsite gulches (which exceeds the OS designated area) and work within the buffer would be limited to electrical utility lines, it would comply with the draft plan policy related to maintaining open space along gulches and drainageways.

The community plan also identifies and addresses areas of change (i.e., places where there are opportunities for growth and progress) and areas of stability (i.e., features the community cares about protecting). The Project site does not fall within any of the designated areas of change. Areas of stability identified within the Project site include gulches (i.e., Pale‘a‘ahu Gulch and Pōhākea Gulch) and dark skies. As an area of stability, gulches are preserved through the OS community plan designation; as noted above, a protective buffer around Pale‘a‘ahu Gulch and Pōhākea Gulch has been incorporated into the Project design, thereby maintaining the open space characteristics. As the Project would involve little to no nighttime lighting, it would also help to maintain dark skies within South Maui. For these reasons, the Project would be consistent with both the Community Plan Map and Growth Plan.

## 10.2.2 Maui Zoning Ordinance

*This section addresses the information requirements related to Maui County Code Title 19 (Zoning Code) as specified in Section I(H)(5) of MAPPs for a CSUP/SSP.*

The Project site is located entirely within the county agricultural zoning district (see Figure 13). MCC Chapter 19.30A lists the uses and structures permitted in the agricultural zoning district, provided they also comply with all other applicable laws. In accordance with MCC Chapter 19.30A.060.A.12, solar energy facilities<sup>54</sup> greater than fifteen acres are a special use in the agricultural zoning district and are permitted if a CSUP is obtained. Below is a discussion of the Project's compliance with the purpose and intent of the agricultural zoning district, the agricultural zoning district standards, and the requirements for a CSUP.

### 10.2.2.1 Purpose and Intent

The purpose and intent of the county's agricultural zoning district is described in MCC Chapter 19.30A.010. Specifically, the purpose of this district is to:

- 1. Implement chapter 205, Hawai'i Revised Statutes, and the goals and policies of the Maui County general plan and community plans;*
- 2. Promote agricultural development;*
- 3. Preserve and protect agricultural resources; and*
- 4. Support the agricultural character and components of the County's economy and lifestyle.*

As discussed in Sections 10.1.2 and 10.2.1, the Project would be consistent with both HRS Chapter 205 as well as the goals and policies of the Maui County general plan and community plan. The Project would be located within an area that has been fallow and unused since HC&S ceased sugarcane plantation operations in 2016; future cultivation of this area is not contemplated with Mahi Pono providing it specifically for renewable energy. The Project would occupy only a small fraction of Mahi Pono's 41,000-acre land holdings and would provide valuable revenue to support their overall diversified agricultural operation across these lands. AES would seek to further balance agricultural and renewable energy needs by partnering with a local agricultural operator to implement compatible agricultural activities within the Project site; additional details regarding the compatible agricultural plan are provided in Section 3.4.2. Upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses. For these reasons, the Project is consistent with the purpose of the agricultural district.

MCC Chapter 19.30A.010 defines the intent of the agricultural district as follows:

- 1. Reduce the land use conflicts arising from encroachment of nonagricultural uses into agricultural areas;*

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<sup>54</sup> "Solar energy facilities" are defined under MCC Chapter 19.04.040 as "any devices, elements, or substances, or any combination of devices, elements, or substances, that rely upon direct sunlight as an energy source, including those that collect sunlight for use in [...] the generation of electricity."

2. *Mitigate rising property values of farm lands to make agricultural use more economically feasible;*
3. *Discourage developing or subdividing lands within the agricultural district for residential uses, thereby preserving agricultural lands and allowing proper planning of land use and infrastructure development;*
4. *Discourage establishment of nonagricultural subdivisions;*
5. *Ensure that the rezoning of land from the agricultural district shall be open for public debate and in the overall public interest, as evidenced by conformance with the Maui County general plan and community plan land use designations and policies, State land use law, this chapter and good planning practices; and*
6. *Notify the public that lands within the agricultural district are used for agricultural purposes. Owners, residents, and other users of such property or neighboring properties may be subjected to inconvenience, discomfort, and the possibility of injury to property and health arising from normal and accepted agricultural practices and operations. Such normal and accepted agricultural practices and operations include but are not limited to noise, odors, dust, smoke, the operation of machinery of any kind, including aircraft, and the storage and disposal of manure. Owners, occupants, and users of such property or neighboring properties shall be prepared to accept such inconveniences, discomfort, and possibility of injury from normal agricultural operations.*

As detailed throughout this application, the Project does not represent a conflicting land use in the agricultural district. By incorporating and subsidizing compatible agriculture as well as providing a reliable source of revenue to Mahi Pono, the Project would support the economic feasibility of agricultural uses, both within the Project site and on the surrounding lands. The Project would not subdivide the land for residential uses, establish a nonagricultural subdivision, nor rezone the property. The impacts from operating the Project with respect to noise, odors, dust, smoke, and operation of machinery are similar to, or in some cases less than, typical agricultural operations, and therefore fit within the expected characteristics of lands within the agricultural district. As such, the Project meets the intent of the agricultural district.

#### 10.2.2.2 District Standards

MCC Chapter 19.30A.030 identifies the district standards for uses, facilities, and structures in the agricultural district. As listed in Table 14, the Project is expected to comply with the development standards for the agricultural zoning district. Compliance with these standards, including setbacks and height restrictions, are also shown on the site plan and associated drawings contained in Appendix D.

**Table 14. District Standards for the Agricultural District**

Standard	Agricultural District Standard	Project Compliance
Minimum lot area	2 acres	>2 acres (approximately 3,898 acres)
Minimum lot width	200 feet	> 200 feet
Minimum front yard	25 feet	≥ 25 feet
Minimum side/rear yard	15 feet	≥ 15 feet
Maximum developable area (percent of zoning lot)	10 percent of zoning lot	Per MCC Chapter 19.30A.030(D), this standard does not apply to utility facilities permitted by MCC Chapter 19.30A
Maximum height	Dwelling: 30 feet Non-dwelling: 35+ feet <sup>1/</sup>	All Project components <35 feet in height except for pole structures within substation/switchyard which would be up to 50 feet tall (with added 25-foot setback) <sup>1/</sup>
Maximum wall height	4 feet (7 feet for utility walls) <sup>2/</sup>	Project would not include any walls
Maximum number of lots	Varies	No lot subdivision proposed
NOTES: 1/ Per MCC Chapter 19.30A.030(E), the maximum height for any non-dwelling structure that is over 35 feet in height shall be set back one additional foot for each foot in structure height. 2/ For one utility wall per lot, utility walls shall not exceed seven feet in height and seven feet in width, and shall not obstruct sight distance for roadways and driveways. This does not preclude constructing fences on the top of the wall for safety purposes.		

### 10.2.2.3 Off Street Parking and Loading Requirements

MCC Chapter 19.36B specifies the requirements for off-street parking and loading and is intended to ensure that onsite areas for parking and maneuvering are provided in sufficient quantities for each type of land use while maximizing safety and minimizing impacts on adjacent properties and the environment.

A specific number of off-street parking spaces for solar energy facilities is not identified in MCC Chapter 19.36B.020; however, the zoning code requires a minimum of one off-street parking space for public utility substations. The Project would comply with this requirement for off-street parking at the substation and switchyard.

### 10.2.2.4 Wetlands Overlay District

Pursuant to MCC Chapter 19.47.070, the County of Maui Planning Department produced a wetland overlay map showing the approximate location of wetlands and other waters throughout the county. The final Wetlands Overlay Map was published by the County of Maui in June 2024. The final Wetlands Overlay Map identifies two features within the Project site – Pōhākea Gulch and Pale‘a‘ahu Gulch – with a 200-foot protective buffer along each feature (see Figure 22). Wetlands Overlay District zoning requirements have yet to be established by the county council. Without wetlands overlay district zoning in place, no protective buffer or grading and grubbing restrictions are in effect. Regardless, as discussed in Section 3.2, the Project has proactively incorporated a 200-foot buffer along both Pōhākea Gulch and Pale‘a‘ahu Gulch. Furthermore, a review of the components specified in MCC Chapter 19.47.030 as

related to the ecosystem values, potential impacts, and efforts to protect and maintain Pōhākea Gulch and Pale‘ā‘ahu Gulch was conducted for consideration as part of the CSUP review process (Appendix T). No solar modules, battery energy storage equipment, or substation/switchyard facilities would be located within the 200-foot buffer around either Pōhākea Gulch and Pale‘ā‘ahu Gulch. Additionally, no improvements would be made to any of the existing roads within the buffer (including the crossings at South 8<sup>th</sup> Street and 9<sup>th</sup> Street). A limited amount of work would occur within 200 feet of the two gulches to interconnect the Project via the designated GCPs identified by Maui Electric, as well as to install two overhead spans of medium-voltage electrical collector lines. However, this work has been sited to maximize distance from the gulches while balancing technical requirements, engineering requirements, and constructability; no ground disturbance would occur within the gulch boundaries, and the poles and associated work pads would be located a minimum of 50 feet from the gulch.<sup>55</sup> Given the very limited amount of work that would occur proximate to the gulches and with implementation of BMPs, the Project is not expected to diminish ecosystem functions or result in significant adverse effects to either of the gulches. As such, the Project is consistent with the intent of MCC Chapter 19.47 and a potential future wetlands overlay district zoning ordinance to protect wetlands/streams and associated ecosystem services.

### 10.2.3 Other Relevant County Regulations

MCC Chapter 20.35 (Outdoor Lighting) establishes standards to limit degradation of the night visual environment by minimizing light glare, pollution, and trespass through regulation of the type and use of outdoor lighting. In general, this chapter requires that all new outdoor lighting fixtures limit the blue light content, be directed downward, and be fully shielded. The Project would include little to no lighting; any onsite lighting would be fully shielded and fitted with compliant light bulbs.

## 10.3 Required Permits and Approvals

*This section addresses the information requirements related to governmental approvals as specified in Section III(4) of MAPPS for a CSUP/SSP.*

Construction of the Project would not proceed until all necessary permits and approvals have been obtained. Table 15 lists the permits and approvals that are expected to be required for construction and operation of the Project.

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<sup>55</sup> Additional work would be conducted by Hawaiian Electric within the energized corridor of the existing 69kV transmission lines to facilitate interconnection of the Project with the existing electric grid. Detailed design information for this work would be included in Maui Electric’s application to the PUC for interconnection of the Project.

**Table 15. Anticipated Permits and Approvals Required for Project**

Permit/Approval <sup>1/</sup>	Regulatory Agency
State Special Use Permit (SUP)	Maui Planning Commission, State Land Use Commission
Maui County Special Use Permit (CSUP)	Maui Planning Commission
Historic Preservation Review (HRS Chapter 6E Compliance)	State Historic Preservation Division (SHPD)
National Pollutant Discharge Elimination System (NPDES) Permit	Department of Health (DOH), Clean Water Branch
Community Noise Permit (if needed)	DOH, Indoor and Radiological Health Branch
Building Permit	County of Maui Department of Public Works Development Services Administration Division
Grading and Grubbing Permit (including Drainage and Erosion Control Plan)	County of Maui Department of Public Works Development Services Administration Division
Stormwater Quality Best Management Practices Plan and Maintenance Plan	County of Maui Department of Public Works Development Services Administration Division
Notice of Proposed Construction or Alteration (Form 7460-1)	Federal Aviation Administration (FAA)
Permit for Oversized and Overweight Vehicles (if needed)	State Department of Transportation (HDOT) Highways Division
Moving Permit (if needed)	County of Maui Department of Public Works Development Services Administration Division
<p>NOTES:</p> <p>1/ In addition to these permits and approvals required for Project construction, PUC approval would also be required for the PPA as well as Maui Electric's overhead line extension for Project interconnection.</p>	

# 11 Permit Criteria

*The following sections address the CSUP/SSP permit criteria as specified in Section V of MAPPS.*

## 11.1 CSUP Criteria

*The following sections address the CSUP criteria as specified in Section VB of MAPPS for a CSUP.*

MCC Chapter 19.510.070 identifies the criteria that must be met for approval of a CSUP. The required criteria are listed in bold below, followed by a discussion of how the Project meets each criterion.

***(1) The proposed request meets the intent of the general plan and the objectives and policies of the applicable community plan of the county.***

Consistency of the Project with the various elements of the Maui County General Plan, including the Countywide Policy Plan, Maui Island Plan, and the Kīhei-Mākena Community Plan (as well as the draft updated South Maui Community Plan), is detailed in Section 10.2.1. In particular, the Project would help to achieve the goals and policies of the Maui Island General Plan and Kīhei-Mākena Community Plan related to increasing the use of alternate energy sources and diversifying the economy through the renewable energy industry.

***(2) The proposed request is consistent with the applicable community plan land use map of the county.***

As discussed in Section 10.2.1.3, the Kīhei-Mākena Community Plan land use map designates the Project site for Agriculture and Project District 11 (Mā‘alaea Village), with a small inclusion of Open Space along the southern boundary.<sup>56</sup> The agricultural land use designation indicates areas intended “for agricultural activity which would be in keeping with the economic base of the County and the requirements and procedures of Chapter 205 HRS, as amended” (County of Maui 1998). The Project is consistent with this land use map designation as it is a permissible use in accordance with HRS Chapter 205, would seek to balance agricultural and renewable energy needs by incorporating compatible agricultural activities, and would allow for future agricultural opportunities upon decommissioning.

The Open Space designation is intended to “limit development on certain urban and non-urban designated lands which may be inappropriate for intensive development due to environmental, physical, or scenic constraints; this category would include but not be limited to shoreline buffer areas, landscape buffers, drainageways, view planes, flood plains, and tsunami areas. Other appropriate urban and non-urban uses may be allowed on a permit basis” (County of Maui 1998). None of the solar photovoltaic, energy storage, or substation/switchyard components would be located in the area designated as Open

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<sup>56</sup> An update to the Kīhei-Mākena Community Plan (County of Maui 1998) is currently in progress. Adoption of the updated plan is expected to occur after this permit application has been submitted. However, anticipating plan adoption, consistency with the Draft South Maui Community Plan (dated May 2025) has also been addressed within this application (see Section 10.2.1.4).

Space; only the proposed interconnection route would be located along the edge of this area, as needed to interconnect with the existing Maui Electric 69kV transmission lines. These interconnection lines would not result in intensive development or substantial loss of open space characteristics.

Project District 11 (Mā'alaea Village) is identified in the Kīhei-Mākena Community Plan as a 650-acre area designated for a master planned residential community, with single and multi-family housing types and community amenities including a golf course, community center, village center with commercial services, community park, pedestrian/bicycle paths, and buffer zones. The community plan specifies that each project district will be implemented through a separate ordinance; however, to date, no ordinance has been passed to implement Project District 11.

***(3) The proposed request meets the intent and purpose of the applicable district.***

The Project site is located entirely within the county agricultural zoning district (see Figure 13). As detailed in Section 10.2.2, the Project is consistent with the purpose and meets the intent of the agricultural zoning district. It would be located within an area that has been fallow and unused since HC&S ceased sugarcane plantation operations in 2016. The solar and energy storage facilities would occupy only a small fraction of Mahi Pono's 41,000-acre land holdings and would provide valuable revenue to support their overall diversified agricultural operation across these lands. The Project would further support agricultural uses through a partnership with a local agricultural operator to integrate compatible agricultural activities within the Project site for the duration of Project operations. Upon decommissioning of the Project, the land would be returned to substantially the same condition as existed prior to the development of solar facilities, thus allowing for the full range of future agricultural uses.

***(4) The proposed development will not adversely affect or interfere with public or private schools, parks, playgrounds, water systems, sewage and solid waste disposal, drainage, roadway and transportation systems, or other public requirements, conveniences, and improvements.***

The Project would not impact any existing educational or recreational facilities, nor would it increase the need for these types of facilities. Similarly, the Project would not require a connection to the county's water or wastewater system, would not change drainage patterns or increase stormwater runoff, nor would it generate a significant new demand for solid waste management services. Access to the Project site would be via a combination of existing privately-owned roads that extend to the Project site from Maui Veterans Highway, Kūihelani Highway, and North Kīhei Road (see Figure 3). A TIAR conducted for the Project concluded that traffic related to Project construction and operation would not change existing levels of service on adjacent roadways leading to the Project site. In addition, if requested by the relevant agencies, a TMP would be prepared prior to construction and would detail the measures that would be implemented to avoid, minimize and mitigate potential impacts to the surrounding roadways. Additional discussion of these topics is provided in Section 7.

***(5) The proposed development will not adversely impact the social, cultural, economic, environmental, and ecological character and quality of the area.***

By providing a new meaningful source of clean, renewable energy, the Project would reduce the island's reliance on imported fossil fuels and the associated contribution to industrial pollution and global climate change. As part of the growing renewable energy industry in Hawai'i, which is identified as a target for policy support in the general plan, the Project would also help to diversify Hawai'i's economy and provide valuable training and well-paying jobs for residents. No adverse socioeconomic impacts would occur.

The Project would be located in an area that has been extensively disturbed by previous commercial agricultural operations and is dominated by non-native species. An iterative siting and design process was used to avoid and minimize potential impacts to sensitive environmental features, resulting in a substantial setback from Waikapū Stream and a protective buffer around the onsite gulches; no sensitive habitats would be impacted. Historic properties within the Project site are limited to features that are related, directly or indirectly, to previous use of the property for commercial sugarcane cultivation. No traditional trails, pre-Contact resources, or cultural practices are known to occur within the Project site. Furthermore, as detailed throughout Section 6, the Project would incorporate a full range of impact avoidance and minimization measures. As such, the Project is not expected to adversely impact environmental, ecological or cultural resources.

***(6) That the public shall be protected from the deleterious effects of the proposed use.***

As discussed in Sections 6.3.9 and 6.3.10, Project implementation would result in short-term impacts related to air quality as a result of dust emissions and noise from construction vehicles and equipment; these impacts would be minimized through BMPs in compliance with state and county requirements.

The Project would also require the use of some hazardous materials; however, only a limited amount of these materials would be present onsite and BMPs would be implemented to avoid and minimize potential impacts. Furthermore, both the solar photovoltaic and battery energy storage system would incorporate multiple and redundant layers of safety features. As such, Project implementation is not expected to result in any significant deleterious effects. Over the long term, the Project would generate clean renewable energy that would replace a portion of electricity that is currently generated by burning imported fossil fuels, thus reducing greenhouse gas emissions and other forms of pollution that are detrimental to human health.

***(7) That the need for public service demands created by the proposed use shall be fulfilled.***

The Project would not create or increase the need for fire response, police or medical services, educational facilities or any other public service demands. A discussion of these topics is provided in Section 8.

***(8) If the use is located in the state agricultural and rural district, the commission shall review whether the use complies with the guidelines established in section 15-15-95 of the rules of the land use commission of the State.***

As described in Section 10.1.2, the Project falls entirely within the state agricultural land use district and requires an SSP pursuant to HRS Chapters 205-2(d) and 205-4.5. As detailed below in Section 10.2, the Project would comply with the LUC guidelines set forth in HAR Section 15-15-95.

## 11.2 SSP Criteria

*The following sections address the SSUP criteria as specified in Section VA of MAPPs for an SSP.*

The LUC has adopted guidelines for determining “unusual and reasonable” uses within agricultural and rural districts other than those for which the district is classified, as specified in HAR Section 15-15-95(c). These guidelines are bulleted in bold below, followed by a discussion of how the Project meets each guideline.

***(1) The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the commission;***

As described in Section 10.12 (and shown on Figure 10 and 16), the Project site is entirely within the state agricultural district and would comprise LSB Class B (approximately 365.493 acres) and E soils (approximately 110.810 acres); the Project would not involve construction of any facilities on land designated as having LSB Class A soils.

Pursuant to HRS Chapter 205-2(d)(6)(B), “solar energy facilities placed within land with soil classified as overall productivity rating class B or C shall not occupy more than ten per cent of the acreage of the parcel, or twenty acres of land, whichever is lesser, unless a special use permit is granted pursuant to section 205-6.” HRS Chapter 205-4.5(a)(21) further clarifies the requirements for solar energy facilities on LSB Class B or C soils, including making the area occupied by the facility available for compatible agricultural activities, providing proof of financial security for decommissioning, and conducting decommissioning within 12 months of the conclusion of operations (with restoration to pre-existing conditions).

In accordance with these regulations, the Project would be a permitted use with issuance of an SSP. This document has been prepared as part of the application for an SPP; as described throughout this document, the Project would comply with the provisions of HRS Chapter 205-4.5(a)(21) as follows:

- **Compatible agricultural activities:** The Project facilities would occupy only a fraction of the overall Project site; AES would partner with a local agricultural entity to implement compatible agricultural activities within the remainder of the Project site, thus exceeding the statutory requirements. Given the site characteristics and lack of onsite water availability, livestock production and beekeeping are expected to be the most viable dual agricultural uses within the Project site. Specific resources committed to support local agricultural partners include making the land available at no cost, providing infrastructure and consultant support, and financial

support with operational expenses. In the event that the agricultural activities described above are determined to not be viable or the proposed agriculture partner ceases operations or an interest in partnering, AES would seek other potential partners for similar agricultural activities and would continue to fulfill the above-referenced commitments (or similar) in support of compatible agriculture.

- **Decommissioning:** The Project will operate for the duration of the PPA. At that point in time, the facility may be re-powered under a re-negotiated PPA (with subsequent permits/approvals) or decommissioned. Decommissioning would involve removal of all equipment associated with the Project within 12 months of ceasing operations, and returning the Project site to substantially the same physical condition as existed prior to Project development. A detailed discussion of decommissioning is provided in Section 3.7, with the decommissioning plan included as Appendix J.
- **Proof of Financial Security:** In accordance with the requirements of HRS Chapter 205-4.5(a)(21), financial assurance for decommissioning would be provided to the Maui Planning Commission prior to the commencement of commercial generation. The financial security would be in the form of a parent guaranty or letter of credit, with the security to remain in place for the duration of the Project.

As further discussed in Section 10.1.3, the Project site falls within an approximately 27,102-acre area that was designated as IAL in 2009, prior to the discontinuation of sugarcane cultivation by HC&S. The Project is a permitted use in the state agricultural district, with issuance of an SSP and incorporation of compatible agricultural activities, as described above. At the end of the Project's useful life, the solar and storage facilities would be decommissioned, thereby maintaining the potential for a full range of future agricultural activities within the Project site. As such, the Project is consistent with the intent of the IAL designation. The Project would also comply with the objectives and policies of HRS Chapter 205A, as detailed in Section 10.1.5.

***(2) The proposed use would not adversely affect surrounding property;***

As described in Sections 3.1 and 5.5, the Project site is bordered by the AES Kūihelani Solar + Storage Project to the north, Mā'ālaea Power Plant to the south, and agricultural land in all other directions. Much of the surrounding agricultural lands are being actively cultivated (or are planned to be cultivated in the near-term) by Mahi Pono as part of their diversified agricultural master plan (Mahi Pono 2024). In addition to diversified agriculture, Mahi Pono set aside land peripheral to their ongoing and planned agricultural activities specifically for renewable energy. As further discussed in Section 6.4.1, the Project would not impair any of the surrounding agricultural activities and would help to support Mahi Pono's overall diversified agricultural operation by providing a valuable source of revenue.

Other uses within approximately one mile of the Project site include the existing AES Kūihelani Solar + Storage Project, County of Maui baseyard facilities, Mā'ālaea Power Plant, Keālia Pond National Wildlife Refuge, condominium developments in Mā'ālaea, and the future master planned Waikapū Country Town (Figure 18). As described in Section 3.2, AES proactively engaged in an iterative siting and design

process to minimize potential impacts to the surrounding environment and nearby communities. Through this process, the Project was sited to avoid environmentally sensitive areas, including a substantial setback from Waikapū Stream and protective buffer around Pale'a'ahu Gulch and Pōhākea Gulch. Project siting efforts also sought to minimize visibility of Project equipment from nearby roadways and other publicly accessible locations, resulting in an increased setback from Kūihelani Highway and North Kīhei Road.

As detailed in Section 6, use of heavy equipment and earthmoving operations during construction would generate noise, as well as temporary fugitive dust and internal combustion engine emissions. BMPs would be implemented to minimize the noise and emission levels, and in general, the impacts are expected to be temporary, intermittent, and localized in nature. Similarly, construction would require a variety of truck deliveries and other vehicle trips; however, these are not expected to measurably affect traffic levels on surrounding roadways. Given the surrounding topography, the Project would be visible to varying degrees from certain areas, including the higher elevations of Waikapū and Wailuku; however, where visible, the Project would generally appear as sub-dominant in the landscape setting and would be viewed in the context of surrounding features including roadways, utility infrastructure, and agricultural operations. Given the relatively low profile of the solar photovoltaic modules, the Project would not obstruct or impede views of Haleakalā, Mauna Kahālāwai, the Pacific Ocean, or other scenic resources. Overall, none of these impacts would be expected to alter the character of the surrounding areas in a manner that would result in significant adverse effects.

***(3) The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water drainage and school improvements, and police and fire protection;***

As noted above, the Project is not expected to generate traffic that would measurably affect local roads and streets, nor would it require any school improvements. Water requirements for both construction and operation of the Project would be minimal, with water obtained from onsite tanks (filled using water trucks); no connection to the domestic water or sanitation system would be required. Overall, the Project would not require improvements to or otherwise burden public infrastructure.

The Project would incorporate multiple and redundant layers of fire prevention and suppression measures, and no occupied buildings would be constructed within the Project site. As such, the Project is not expected to unreasonably burden fire protection services. During construction, the Project site would be staffed with security personnel on an as-needed basis. Once operational, the facilities would be adequately secured and are not expected to require additional security on a regular basis. Therefore, the Project is also not expected to unreasonably burden police services.

***(4) Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established; and***

In the time since the state land use district boundaries and associated rules were established, the State of Hawai'i has adopted requirements related to renewable energy. As discussed in Section 2.1, the State of Hawai'i established an RPS, as codified in HRS Chapter 269-92, which specifies that electric utility companies in Hawai'i must use renewable energy for the equivalent of 30 percent of net electricity sales

by 2020, 40 percent by 2030, seventy percent by 2040, and 100 percent by 2045. To achieve these renewable energy goals, Hawaiian Electric's IGP identifies the need for substantial inputs from both customer rooftop solar and distributed storage, as well as utility-scale renewable energy projects. The importance of these resource additions is underscored by the impending retirement of the existing fossil fuel-fired generating units at Maui Electric's Kahului Power Plant and Mā'ālaea Power Plant.

Utility-scale solar projects require relatively large tracts of undeveloped land with minimal topography. In addition to meeting this requirement, the Project site is well suited for solar energy generation based on its proximity to the existing Maui Electric grid infrastructure, distance from nearby homes and communities, and site accessibility, all of which help to minimize the need for additional infrastructure and overall impact to surrounding areas. Furthermore, the existing Maui Electric 69kV transmission lines that traverse this area were specifically identified by Hawaiian Electric in their Stage 3 RFP as some of the only grid facilities across the island with sufficient capacity to accommodate a utility-scale renewable energy project.

The Project would help to meet the state's need for renewable energy by providing up to 40 MW of solar energy and 160 MWh of battery storage, which is enough to provide electricity for the equivalent of approximately 18,425 homes (based on average energy use). In doing so, it would directly contribute to the state's renewable energy goals and supply a meaningful portion of the island of Maui's energy needs. Recognizing the need to balance renewable energy and agricultural production, AES would also partner with a local agricultural operator and provide resources for compatible agricultural activities (such as sheep production and beekeeping) within the Project site; specific resources committed to the compatible agricultural partner include making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. At the end of its useful life, the Project would be decommissioned, with the site returned to its existing condition (or comparable), thereby maintaining the potential for a full range of future agricultural uses.

***(5) The land upon which the proposed use is sought is unsuited for the uses permitted within the district.***

As detailed above, pursuant to HRS Chapters 205-2 and 205-4.5, solar energy facilities are a permitted use within the state agricultural land use district. The Project site was previously cultivated as part of an extensive sugarcane plantation, but has been fallow since 2016. Future cultivation of this area is not contemplated as it has been provided by Mahi Pono specifically for renewable energy. The proposed solar facility would not impair agricultural productivity and would provide valuable revenue to help support Mahi Pono's overall diversified agricultural operation on the surrounding lands. Within the Project site, the solar generation and energy storage facilities would occupy only a fraction of the area, leaving ample open space between and surrounding the facilities. As part of the Project, AES would implement a compatible agricultural plan which includes support and subsidies for compatible agricultural uses in partnership with a local agricultural operator. Based on a thorough analysis of feasible agricultural opportunities, it is anticipated that AES would partner with LPP to implement livestock production and beekeeping; specific resources committed to support these activities include

making the land available at no cost, providing infrastructure and consultant support, and financial support with operational expenses. Such an operation would provide meaningful agricultural outputs as well as a sustainable form of vegetation management and fire prevention, thus balancing Maui's renewable energy and agricultural needs. Furthermore, the Project would include specific decommissioning provisions in which the solar facilities would be removed and the land would be returned to substantially the same condition as existed prior to Project development, thus allowing for the full range of future agricultural uses within the Project site.

# 12 Long Range Planning Information

*This section addressed the information required for long range planning purposes as specified in Section VI of MAPPS for a CSUP/SSP.*

## A. PERMITS REQUESTED

- |                      |  |
|----------------------|--|
| 1. Requested Permits | CSUP – County Special Use Permit<br>SUP1 – State Special Permit – 15 acres or more |
|----------------------|--|

## B. RESIDENTIAL PROJECTS

- |   |  |
|---|--|
| 1. How many single-family units?  | Not applicable (not a residential project) |
| 2. Will any accessory dwellings be permitted?   | Not applicable (not a residential project) |
| 3. If yes, how many?  | Not applicable (not a residential project) |
| 4. How many multi-family units are you building?  | Not applicable (not a residential project) |
| 5. Are you subdividing your property?   | Not applicable (not a residential project) |
| 6. If yes, how many buildable lots are you requesting to create?  | Not applicable (not a residential project) |
| 7. How many acres, or square feet, is the project site?   | Not applicable (not a residential project) |
| 8. If only a portion of the property is going to be used for this project, how many acres or square feet will be used just for the project? | Not applicable (not a residential project) |

## C. LAND USE ENTITLEMENTS

Will This Project Require Land Use Amendments?

- |                                   |                |
|-----------------------------------|----------------|
| 1. Change of Zoning (COZ)         | No             |
| 2. Change of Zoning (COZ) From:   | Not applicable |
| 3. Change of Zoning (COZ) To:     | Not applicable |
| 4. Community Plan Amendment       | No             |
| 5. Community Plan Amendment From: | Not applicable |
| 6. Community Plan Amendment To:   | Not applicable |

- |  |   |
|--|---|
| 7. State Land Use District Boundary Amendment  | No  |
| 8. State Land Use District Boundary Amendment From:  | Not applicable  |
| 9. State Land Use District Boundary Amendment To:  | Not applicable  |
| 10. Maui Island Plan Designation Change  | No  |
| 11. Maui Island Plan Designation Change From:  | Not applicable  |
| 12. Maui Island Plan Designation Change To:  | Not applicable  |
| 13. Will you be selling any of the units as "affordable" as defined under HUD guidelines?  | Not applicable (not a housing project)                          |
| 14. If yes, how many units, or percentage of units will fall under this category?  | Not applicable (not a housing project)                          |
| 15. From the date of filing the application with the Planning Dept., how long do you estimate the project to reach complete build-out? | The Project has a target commercial operation date of EOY 2028. |

**D. INDUSTRIAL / COMMERCIAL PROJECTS**

Will This Property Be Used For?

- |                        |    |
|------------------------|----|
| 1. Retail Purposes     | No |
| 2. Office Space/Lease  | No |
| 3. Industrial Purposes | No |

**E. BED AND BREAKFAST (B&B), SHORT-TERM RENTAL (STRH) AND TRANSIENT VACATION RENTALS (TVRs)**

- |   |                |
|---|----------------|
| 1. Will the project have a B&B, STRH, or TVR component? | No             |
| 2. Will (any of) the unit(s) be owner occupied?         | Not applicable |
| 3. How many bedrooms are proposed for rental?           | Not applicable |
| 4. Will this project be newly constructed?              | Not applicable |
| 5. How many dwellings are entirely rented to visitors?  | Not applicable |

**F. VISITOR ACCOMMODATIONS**

- |                                  |                |
|----------------------------------|----------------|
| 1. Hotels and Timeshares Details | Not applicable |
|----------------------------------|----------------|

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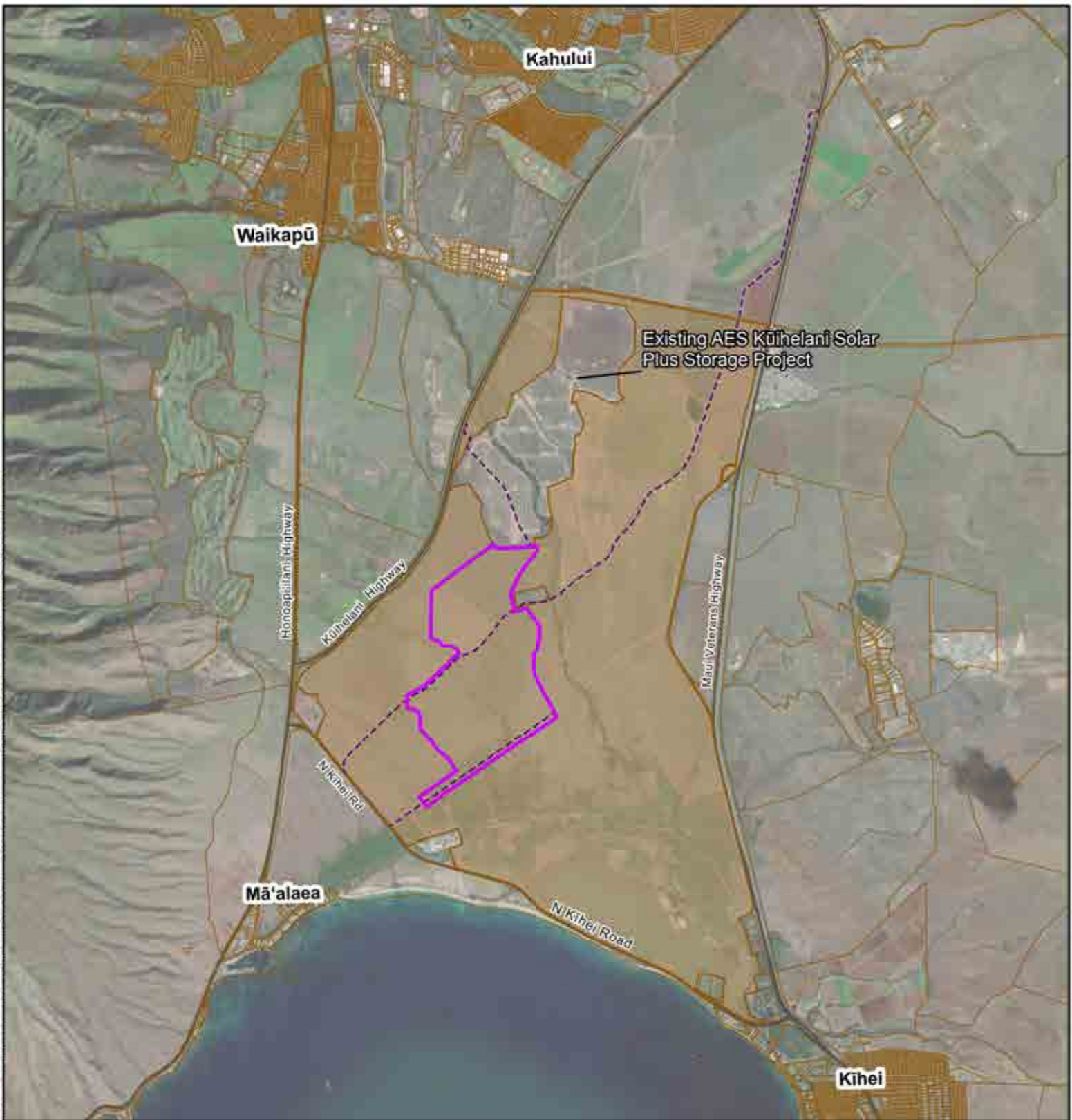
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# Figures





1:50,000 WGS 1984 UTM Zone 4N 0 0.5 1 2 Miles NOT FOR CONSTRUCTION

### Kūhelani Solar Phase 2 Project

- Project Site
- Project TMK ((2) 3-8-005:002-0003)
- TMK Boundary
- Existing Access Route
- Major Road

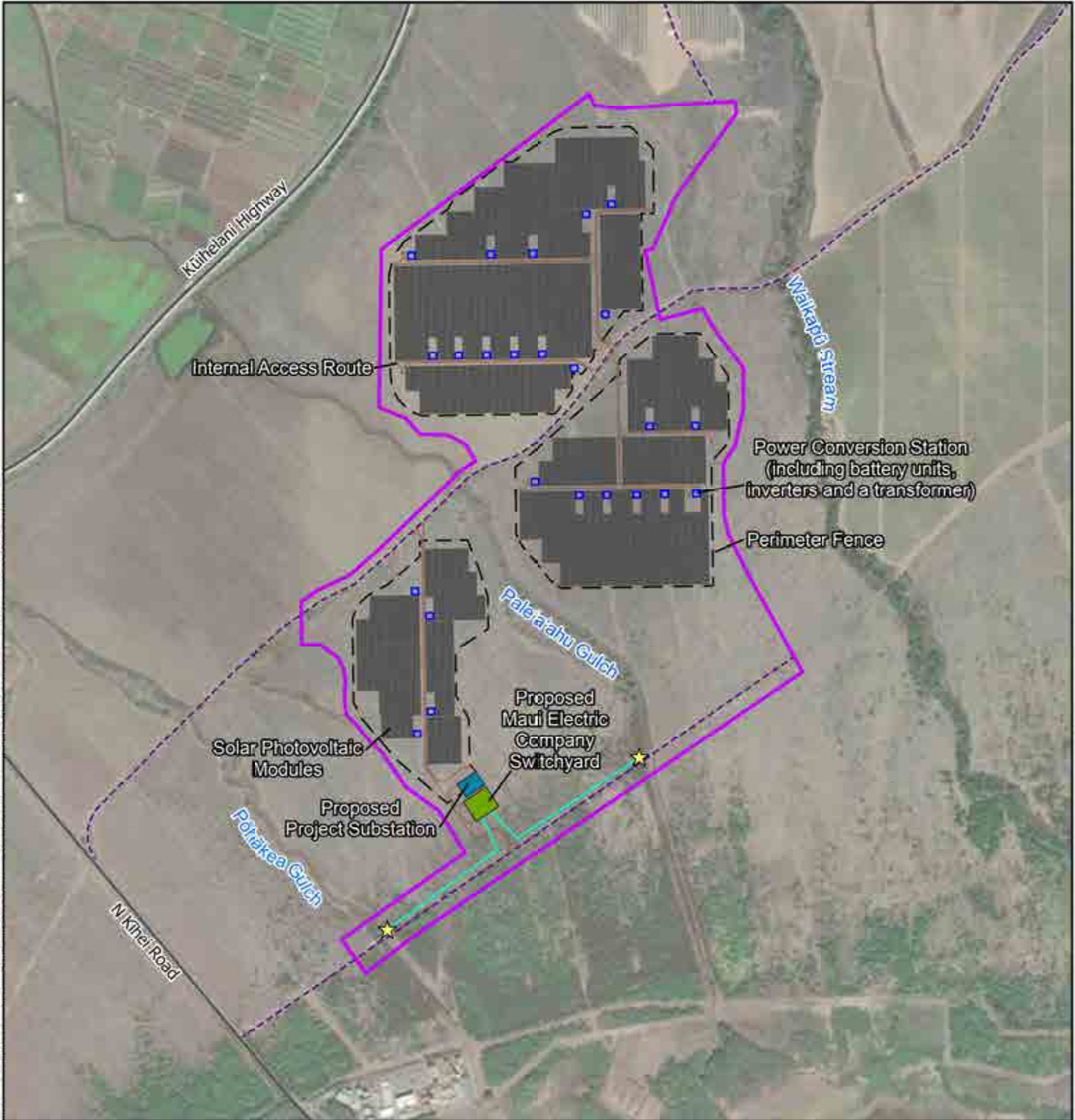
**Figure 2**  
**Tax Map Keys**

MAUI COUNTY, HAWAII




















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### Kūihelani Solar Phase 2 Project

**Figure 5**  
**Project Site Plan**

MAUI COUNTY, HAWAII

- |   |                                   |   |                            |
|---|-----------------------------------|---|----------------------------|
|  | Project Site                      |  | Solar Photovoltaic Modules |
|  | Proposed Project Substation       |  | Power Conversion Station   |
|  | Proposed Maui Electric Switchyard |  | Perimeter Fence            |
|  | Proposed Grid Connection Points   |  | Existing Access Route      |
|  | Proposed Interconnection Route    |  | Internal Access Route      |
|   |                                   |  | Major Road                 |





Photograph of typical solar photovoltaic modules on single-axis tracking system (*Lawai Solar Project*)



Photograph of typical DC collection cabling system and disconnect switch stations (*Kūihelani Solar + Storage*)

**Figure 6**  
**Representative Photograph of Solar Photovoltaic**  
**Modules and Single-Axis Tracking System**



Photograph of typical power conversion station including battery energy storage system and associated components (*Kūihelani Solar + Storage*)



Photograph of typical battery racks within storage container (*Kūihelani Solar + Storage*)

**Figure 7**  
**Representative Photographs of Power Conversion**  
**Station Including Battery Energy Storage System**



Photograph of typical Project substation (*Kūihelani Solar + Storage*)



Photograph of typical switchyard (*Kūihelani Solar + Storage*)

**Figure 8**  
**Representative Photographs of**  
**Typical Substation and Switchyard**



Photograph of typical sheep grazing operation within solar facility (*Lawai Solar + Storage*)



Photograph of typical sheep grazing operation within solar facility (*Kūihelani Solar + Storage*)

**Figure 9**  
**Representative Photographs of Compatible**  
**Agricultural Activities With AES Solar Facilities**

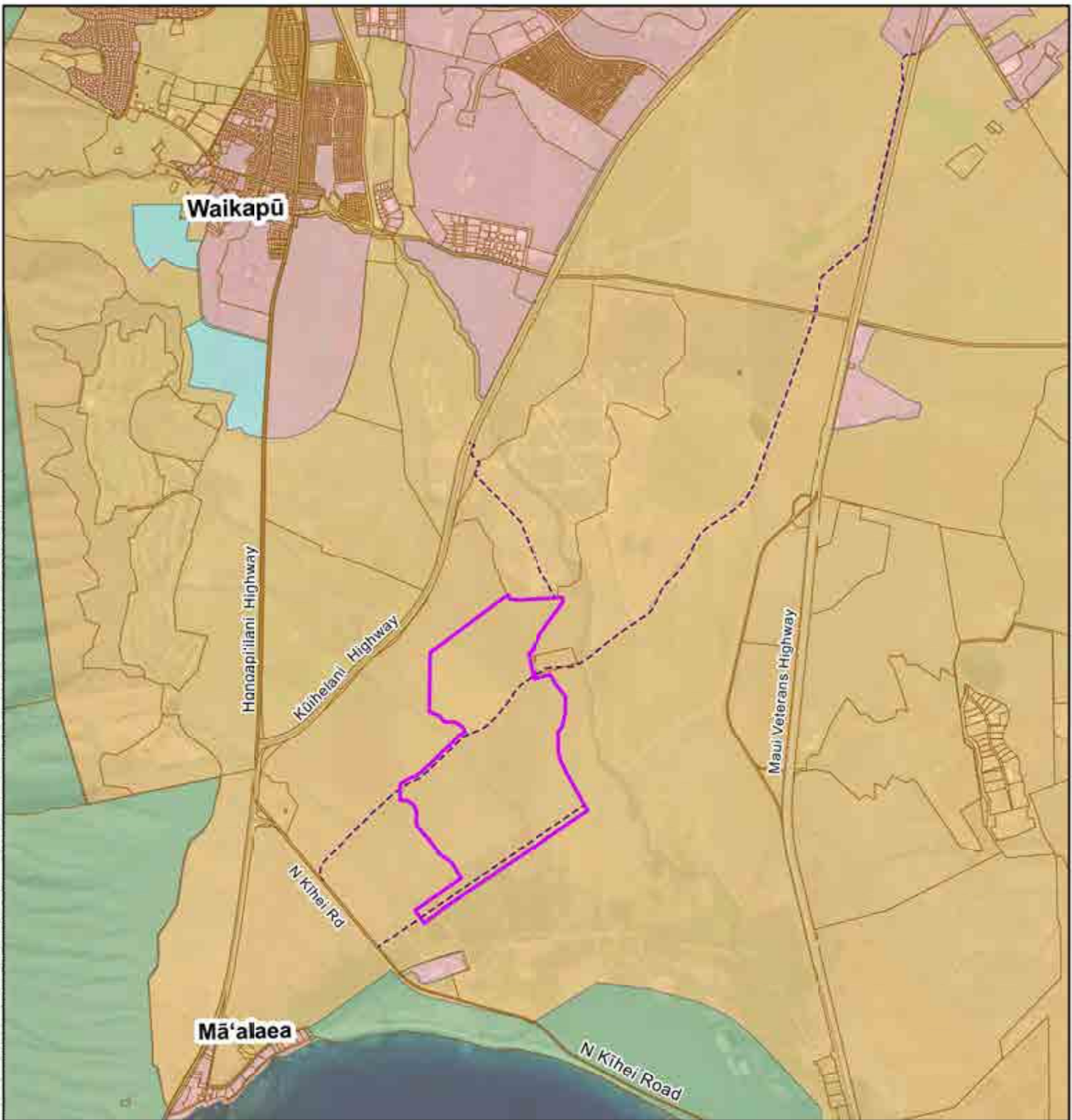


Photograph of typical sheep grazing operation within solar facility (*West O'ahu Solar + Storage*)



Photograph of beehives for local honey production (*West O'ahu Solar + Storage*)

**Figure 9**  
**Representative Photographs of Compatible**  
**Agricultural Activities Within AES Solar Facilities**



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### Kūihelani Solar Phase 2 Project

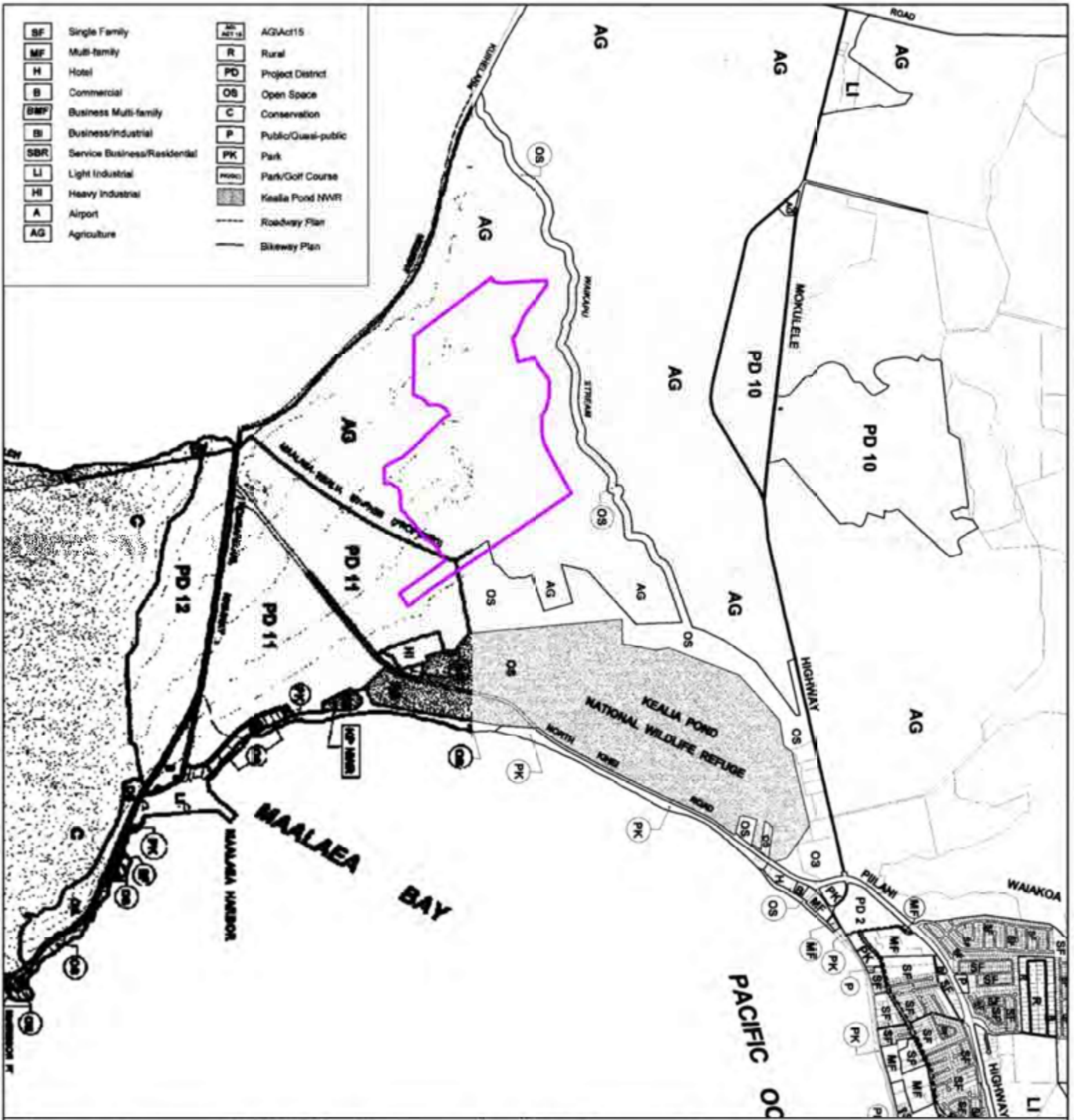
**Figure 10**  
**State Land Use Districts**

MAUI COUNTY, HAWAII

- Project Site
  - TMK Boundary
  - Existing Access Route
  - Major Road
- State Land Use**
- Agricultural Land Use District
  - Conservation Land Use District
  - Rural Land Use District
  - Urban Land Use District



- |   |  |
|---|--|
| <b>SF</b> Single Family                 | <b>AG Act 15</b> AG Act 15             |
| <b>MF</b> Multi-family                  | <b>R</b> Rural                         |
| <b>H</b> Hotel                          | <b>PD</b> Project District             |
| <b>B</b> Commercial                     | <b>OS</b> Open Space                   |
| <b>BMP</b> Business Multi-family        | <b>C</b> Conservation                  |
| <b>BI</b> Business/Industrial           | <b>P</b> Public/Quasi-public           |
| <b>SBR</b> Service Business/Residential | <b>PK</b> Park                         |
| <b>LI</b> Light Industrial              | <b>PKGC</b> Park/Golf Course           |
| <b>HI</b> Heavy Industrial              | <b>Kealia Pond NWR</b> Kealia Pond NWR |
| <b>A</b> Airport                        | <b>---</b> Roadway Plan                |
| <b>AG</b> Agriculture                   | <b>---</b> Bikeway Plan                |



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### Kūihelani Solar Phase 2 Project

Figure 11  
Kihei-Mākena  
Community Plan  
Land Use Map

MAUI COUNTY, HAWAII

 Project Site



- Plan Designations**
- RR Rural Residential
  - RES Residential
  - NC Neighborhood Center
  - STC Small Town Center
  - TOC Transit Oriented Corridor
  - RH Resort/Hotel
  - EC Employment Center
  - IN Industrial
  - SPD Special Purpose District
  - PQP Public/Quasi Public
  - PK Park
  - OS Open Space
  - AG Agriculture
  - SC State Conservation
- Maui Island Plan**
- Urban Growth Boundary
  - Rural Growth Boundary
- Others**
- Sea Level Rise Exposure Area - 3.2 Ft.
  - Department of Hawaiian Homelands



1:40,000      WGS 1984 UTM Zone 4N      0 0.25 0.5 1 Miles      NOT FOR CONSTRUCTION

**Kūihelani Solar Phase 2 Project**

**Figure 12**  
**Draft South Maui Community Plan**  
**Land Use Map**

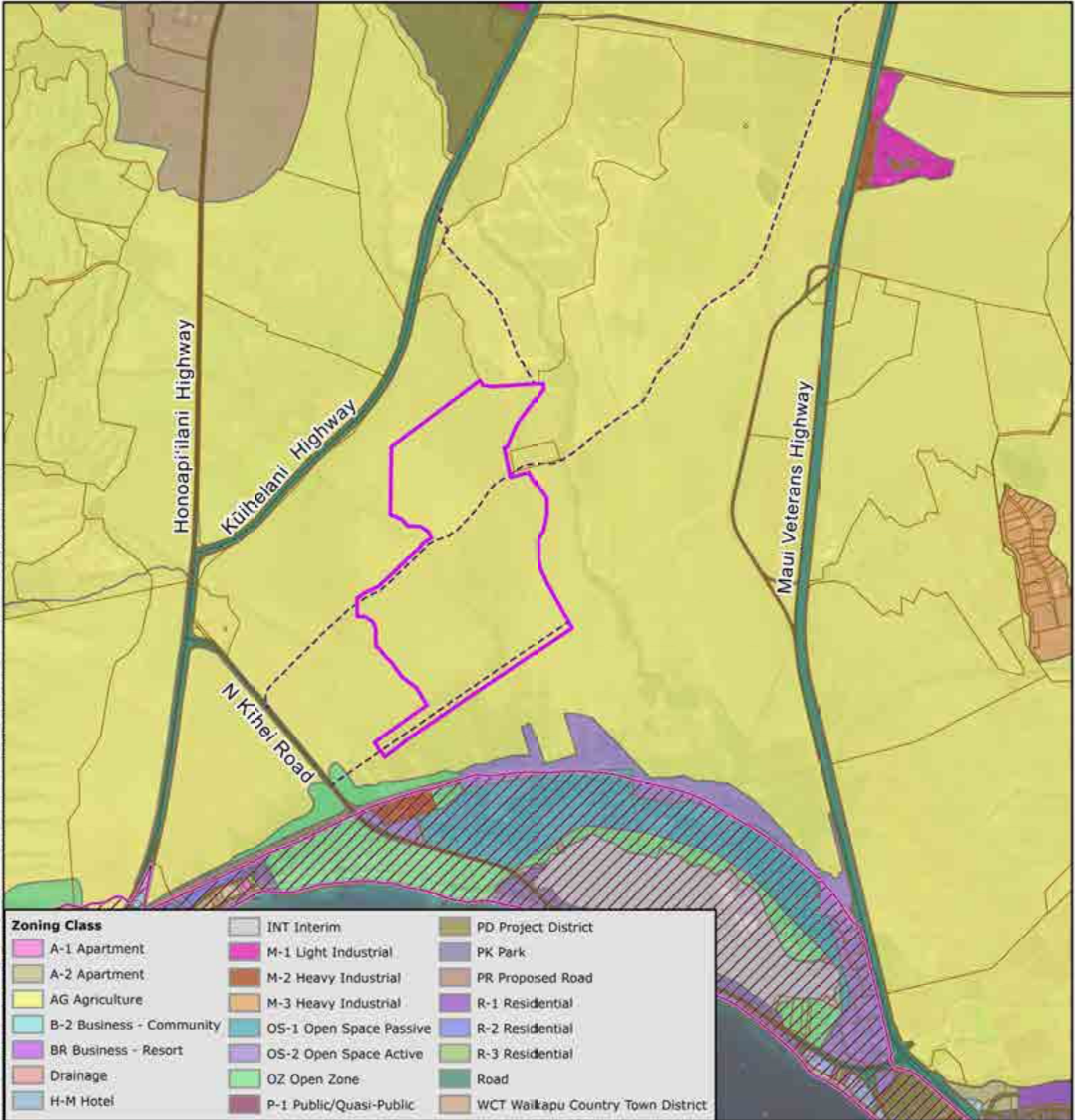
MAUI COUNTY, HAWAII

Project Site

**TETRA TECH**   
 **aes Hawaii**



I:\Projects\2023\20230901\000001\_Draft\_South\_Maui\_Community\_Plan\_Land\_Use\_Map\20230901\Map\_Series\20230901\_Map\_Series\_001.aprx



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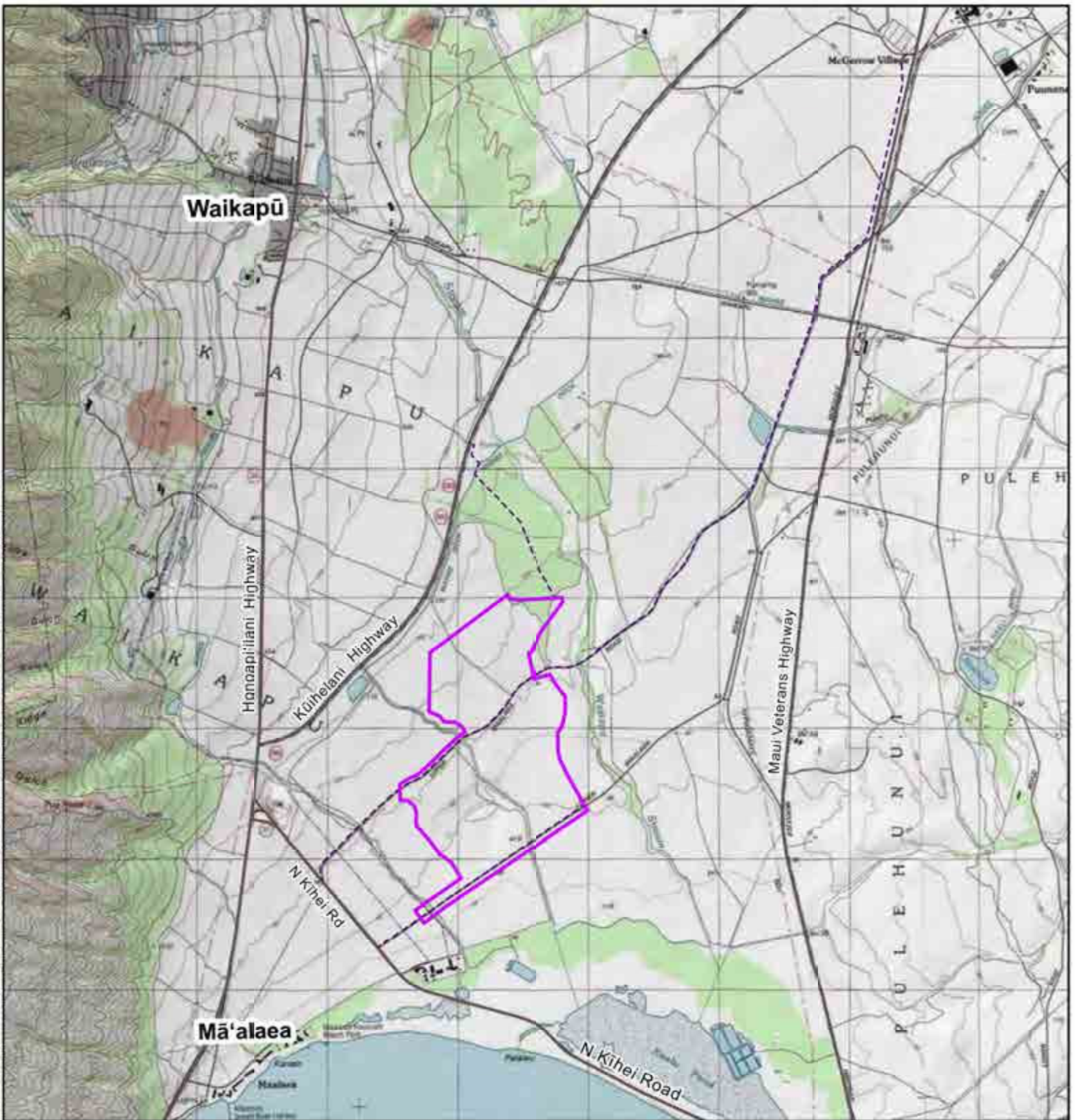
## Kūihelani Solar Phase 2 Project

**Figure 13**  
County Zoning Designations

MAUI COUNTY, HAWAII

- Project Site
- TMK Boundary
- Existing Access Route
- Major Road
- Special Management Area





### Kūihelani Solar Phase 2 Project

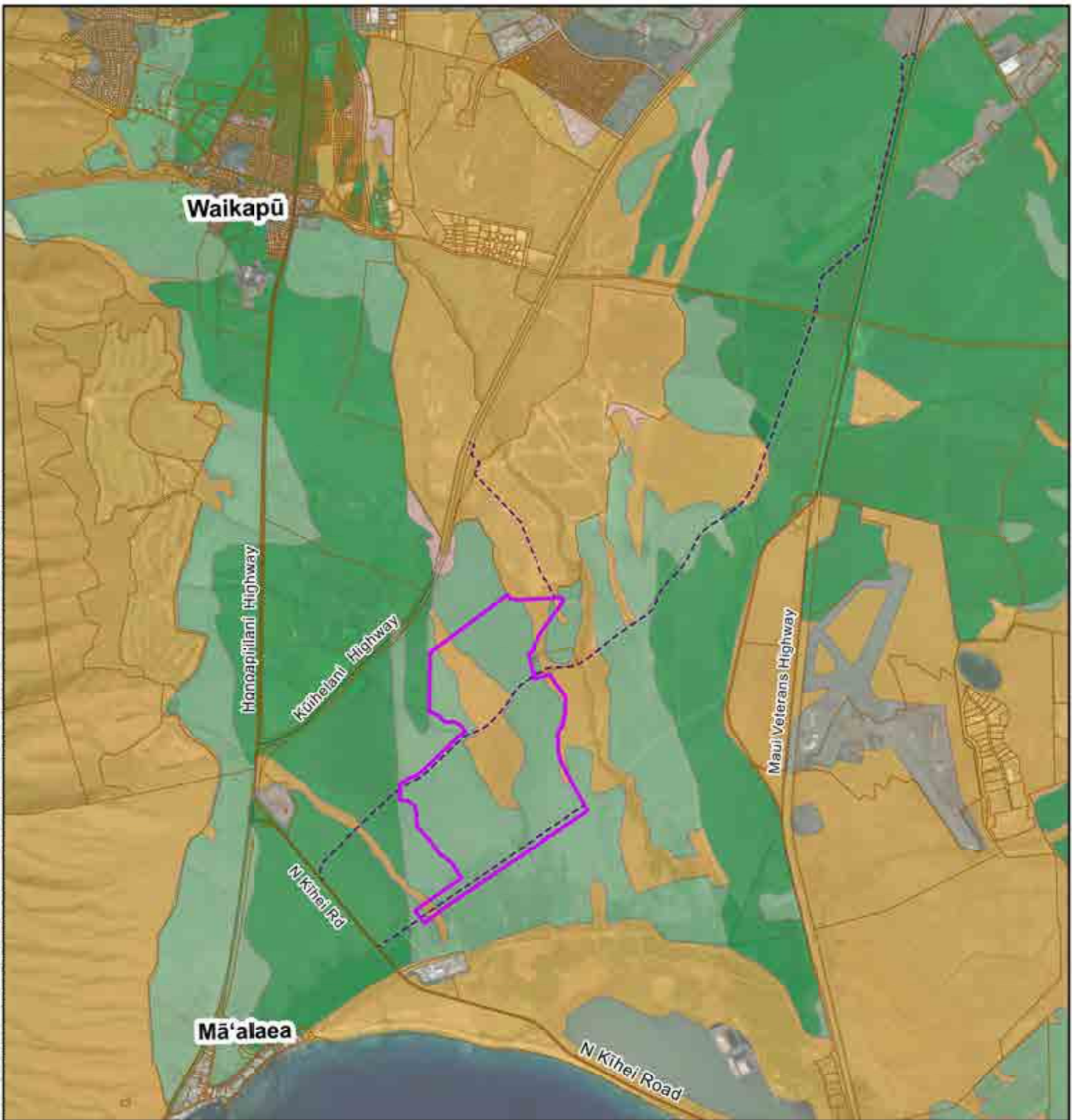
Figure 14  
USGS  
Topographic Map

MAUI COUNTY, HAWAII

- Project Site
- Existing Access Route
- Major Road







1:40,000      WGS 1984 UTM Zone 4N      0 0.25 0.5 1 Miles      NOT FOR CONSTRUCTION

### Kūihelani Solar Phase 2 Project

**Figure 16**  
Land Study Bureau (LSB)  
Classification

MAUI COUNTY, HAWAII

- |                       |                                      |
|-----------------------|--------------------------------------|
| Project Site          | <b>Land Study Bureau (LSB) Class</b> |
| TMK Boundary          | A                                    |
| Existing Access Route | B                                    |
| Major Road            | C                                    |
|                       | D                                    |
|                       | E                                    |

#### Reference Map







**Land Uses**

- |                                      |  |
|--------------------------------------|--|
| Army National Guard                  | Maui Lani Golf Course  |
| Central Maui Baseyard                | Maui Raceway Park  |
| Central Maui Region Sports Complex   | Pomaika'i Elementary School                                  |
| Keālia Pond National Wildlife Refuge | County of Maui Baseyard Facilities                           |
| King Kamehameha Golf Club            | Proposed Waikapu Country Town Agricultural Preserve          |
| Mā'alaea Harbor                      | Proposed Waikapu Country Town Development                    |
| Mā'alaea Power Plant                 | Waiko Light Industrial / Waiale Business Park                |
| Maui Humane Society                  | Proposed Wai'ale Mixed Use Community Master Plan Development |
|                                      | The Dunes at Maui Lani Golf Course                           |

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**Kūihelani Solar Phase 2 Project**

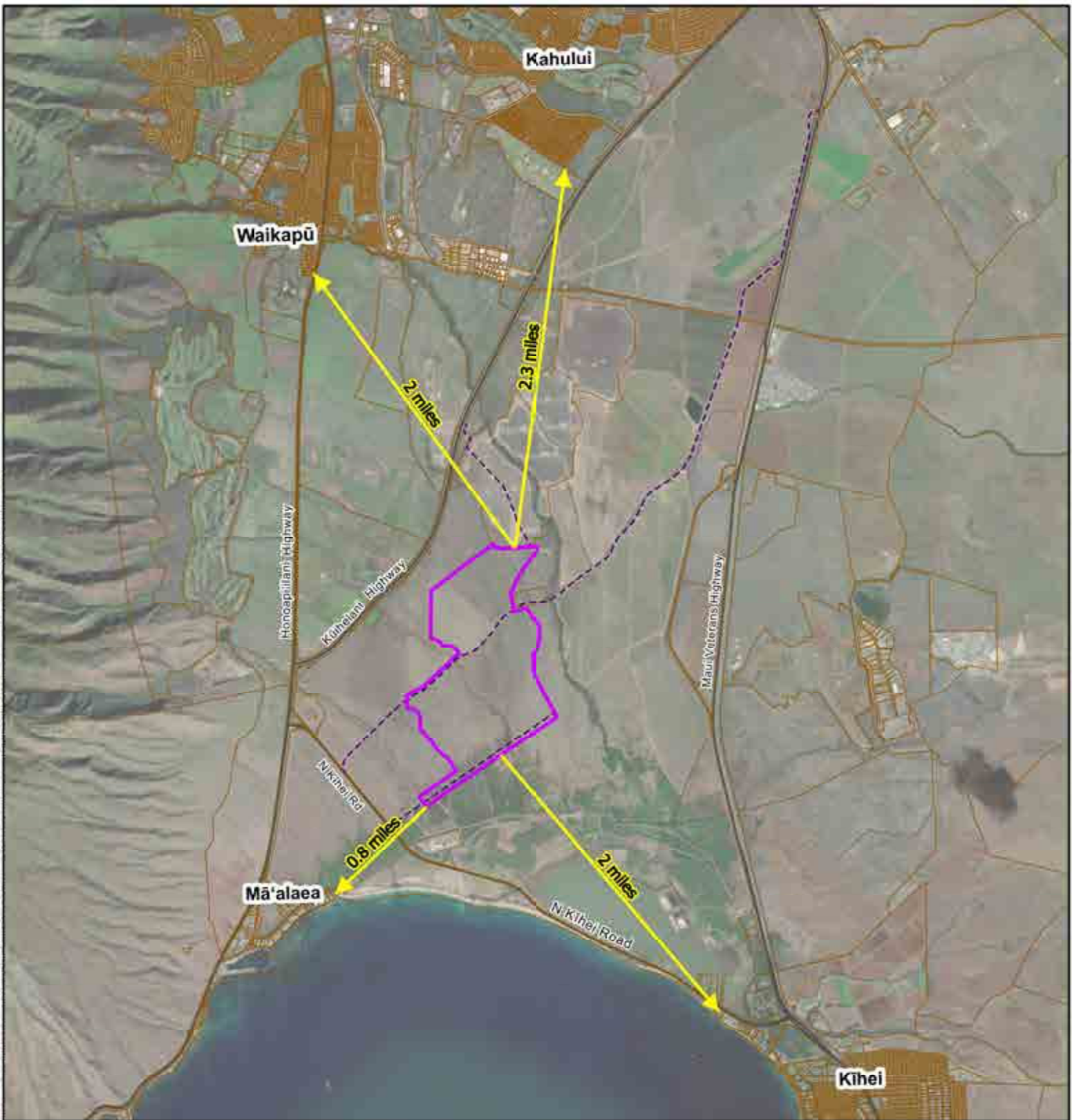
**Figure 18  
Surrounding Land Uses**

MAUI COUNTY, HAWAII

- |                       |  |
|-----------------------|--|
| Project Site          | Maui County Shoreline Access Locations |
| TMK Boundary          | Nā Ala Hele Trails and Access          |
| Existing Access Route |  |
| Major Road            |  |

**Reference Map**





1:50,000 WGS 1984 UTM Zone 4N 0 0.25 0.5 1 Miles NOT FOR CONSTRUCTION

### Kūihelani Solar Phase 2 Project

- Project Site
- TMK Boundary
- Existing Access Route
- Major Road
- ➔ Nearby Community

**Figure 19**  
**Nearby Communities**

MAUI COUNTY, HAWAII







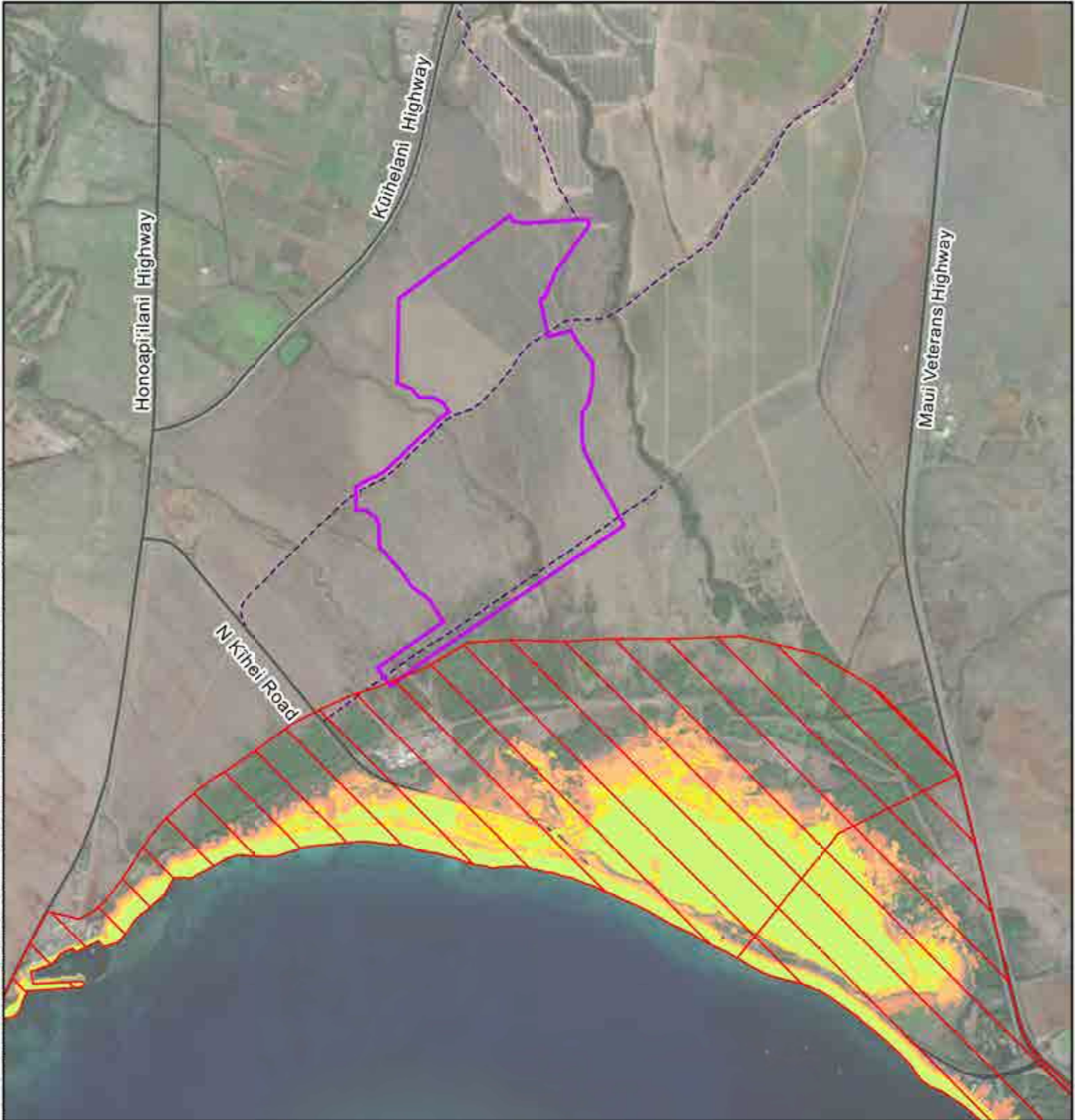


Honoapiʻilani Highway

Kūihelani Highway

Mauj Veterans Highway

N Kīhei Road



1:28,000

WGS 1984 UTM Zone 4N

0 0.25 0.5 1 Miles

NOT FOR CONSTRUCTION





### Kūihelani Solar Phase 2 Project

**Figure 23**  
Tsunami Evacuation and Sea-Level Rise Inundation Areas

MAUI COUNTY, HAWAII

-  Project Site
-  Existing Access Route
-  Major Road
-  Tsunami Evacuation Zone

#### Sea Level Rise Exposure Areas

-  0.0 - 0.5 feet
-  0.5 - 1.1 feet
-  1.1 - 2.0 feet
-  2.0 - 3.2 feet

#### Reference Map





**Flood Zone Subtype**

	A - 1% annual chance floodplain. No Base Flood Elevations.
	AE - 1% annual chance floodplain. Base Flood Elevations shown.
	AEF - Floodway.
	AO - 1% shallow flooding. Average depths between 1 and 3 ft.
	VE - Coastal areas subject to 1% annual chance with additional hazards associated with storm waves.
	XS - 0.2% annual chance floodplain.
	X - Area of minimal flood hazard.

1:28,000      WGS 1984 UTM Zone 4N      0      0.25      0.5      1 Miles      NOT FOR CONSTRUCTION

**Kūihelani Solar Phase 2 Project**

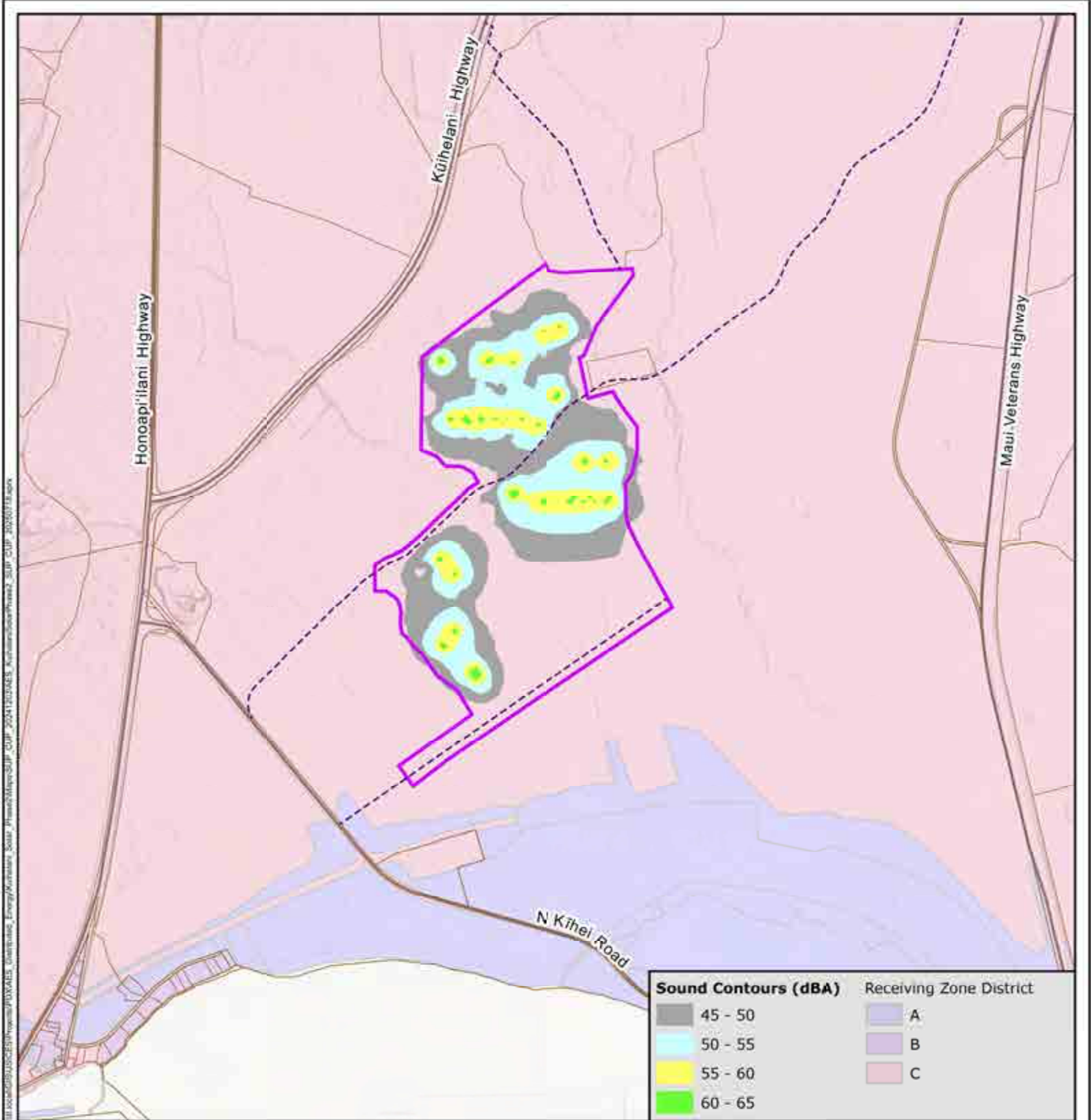
**Figure 24  
Flood Hazard Zones**

MAUI COUNTY, HAWAII

Project Site  
 Existing Access Route  
 Major Road

TETRA TECH    aes Hawaii





1:25,000      WGS 1984 UTM Zone 4N      0      0.25      0.5      1 Miles      NOT FOR CONSTRUCTION

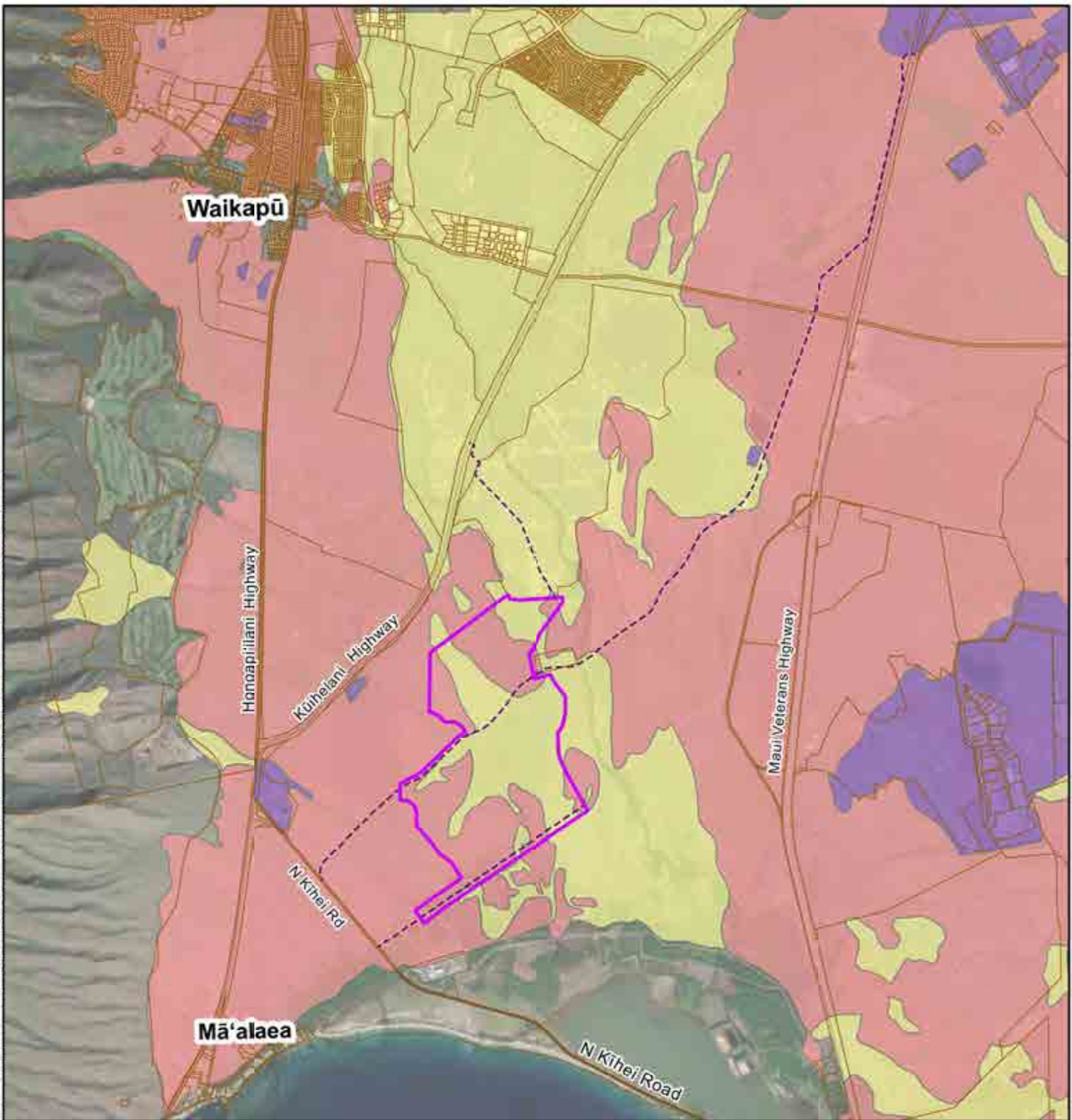
### Kūihelani Solar Phase 2 Project

**Figure 25**  
Received Sound Levels

MAUI COUNTY, HAWAII

- Project Site
- TMK Boundary
- Existing Access Route
- Major Road





1:40,000      WGS 1984 UTM Zone 4N      0 0.25 0.5 1 Miles      NOT FOR CONSTRUCTION

### Kūhelani Solar Phase 2 Project

**Figure 26**  
Agricultural Lands of Importance to the State of Hawai'i

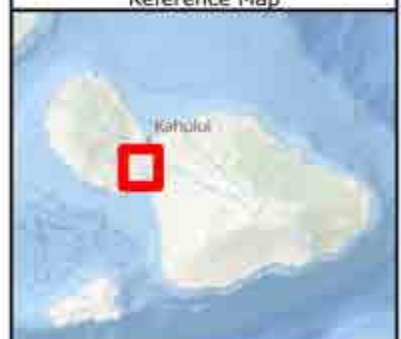
MAUI COUNTY, HAWAII

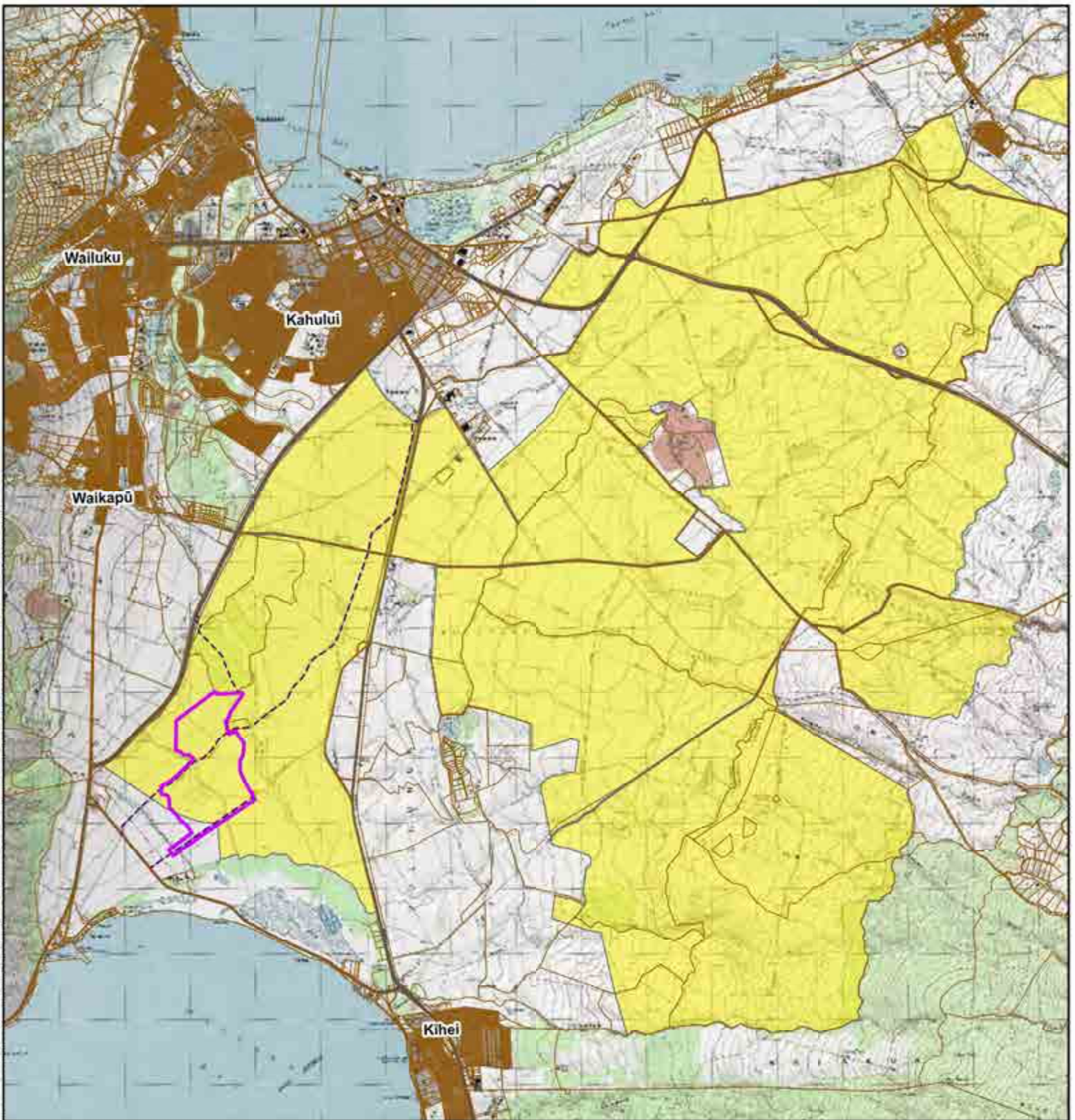
- Project Site
- TMK Boundary
- Existing Access Route
- Major Road

#### ALISH Land Classification

- Unclassified
- Prime Lands
- Unique Lands
- Other Lands

#### Reference Map





1:80,000      WGS 1984 UTM Zone 4N      0 0.5 1 2 Miles      NOT FOR CONSTRUCTION

### Kūihelani Solar Phase 2 Project

**Figure 27**  
Important Agricultural Lands

MAUI COUNTY, HAWAII

-  Project Site
-  Designated Important Agricultural Lands
-  TMK Boundary
-  Existing Access Route
-  Major Road

