RICHARD T. BISSEN, JR.
Mayor

SHAYNE R. AGAWA, P.E.
Director

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MICHAEL KEHANO, P.E.
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ERIC A. NAKAGAWA, P.E.
Wastewater Reclamation Division

Environmental Protection &
Sustainability Division

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2145 KAOHU STREET, SUITE 102
WAILUKU, MAUI, HAWAI'I 96793

April 9, 2025

Mary Alice Evans, Director
Office of Planning & Sustainable Development
State of Hawai'i Department of Business, Economic Development and Tourism
235 South Beretania Street, 6th Floor
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment and Anticipated Finding of No Significant Impact
Wahikuli Subdivision Gravity Sewer System
Maui Tax Map Key Plats (2) 4-5-014, (2) 4-5-027, (2) 4-5-028, (2) 4-5-030, and (2) 4-5-036
Wahikuli, Lahaina, Island of Maui

Dear Ms. Evans:

The County of Maui, Department of Environmental Management (DEM) hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFNSI) for the Wahikuli Subdivision Gravity Sewer System project for publication in the next available edition of *The Environmental Notice*. The proposed project will affect Maui Tax Map Key Plats (2) 4-5-014, (2) 4-5-027, (2) 4-5-028, (2) 4-5-030, and (2) 4-5-036.

We are providing this DEA-AFNSI electronically via the online "HRS Chapter 343 Publication Submittal Form." This submittal includes a searchable pdf file of the DEA-AFNSI and a .zip file containing a shapefile of the action location boundary.

If you have any questions, please contact Mr. Rommel Yanos in the DEM Wastewater Reclamation Division, at (808) 270-7426 or via email at Rommel.Yanos@co.maui.hi.us

Sincerely,

Shayne R Agawa

DN: cn=Shayne R. Agawa, o=Director of Dept. of Environmental Management, ou=County of Maui, email=shayne.agawa@co.maui.hi.us, c=US
Date: 2025.04.10 13:58:00 -10'00'

SHAYNE R. AGAWA, P.E.
Director of Environmental Management
County of Maui

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Monday, April 14, 2025 10:50:52 AM

Action Name

Wahikuli Subdivision Gravity Sewer System

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Lahaina, Maui

Tax Map Key(s) (TMK(s))

TMK plats (2) 4-5-014, (2) 4-5-027, (2) 4-5-028, (2) 4-5-030, and (2) 4-5-036

Action type

Agency

Other required permits and approvals

Numerous (see document)

Proposing/determining agency

Department of Environmental Management

Agency jurisdiction

County of Maui

Agency contact name

Rommel Yanos

Agency contact email (for info about the action)

Rommel.Yanos@mauicounty.gov

Email address for receiving comments

WahikuliSewerEA@aecom.com

Agency contact phone

(808) 270-7426

Agency address

2200 Main Street, Suite 610
Wailuku, HI 96793
United States
Map It

Is there a consultant for this action?

Yes

Consultant

AECOM

Consultant contact name

Jarrett Brown

Consultant contact email

jarrett.brown@aecom.com

Consultant contact phone

(808) 529-7248

Consultant address

1001 Bishop Street, Suite 1600
Honolulu, HI 96813
United States
Map It

Action summary

The Proposed Action involves designing and constructing a gravity sewer system for the Wahikuli subdivision in Lahaina, HI. Final design of the project will be undertaken following completion of the EA.

The proposed gravity sewer system would be installed in the County of Maui roadway rights-of-way and, as needed, easements across private property. It would avoid existing drainage culverts and waterlines servicing the Wahikuli subdivision. The system would connect to the existing Lahaina sewer system at the operational Lahaina No. 3 Pump Station. The proposed connection would be to the existing sanitary manhole #10 in front of the wet well for the pump station on the eastern side of Honoapiʻilani Hwy, State Route 30.

The Proposed Action may involve installing sump or grinder pumps for certain properties where connecting to the sewer system via gravity is difficult due to grade differences. Easements may be necessary for constructing sewer laterals and County sewer lines for properties that do not have direct access to a public roadway. The need for sump or grinder pumps and easements will be assessed in the EA and confirmed during the design phase of the Proposed Action.

Reasons supporting determination

Draft Environmental Assessment (EA) Section 8.1 provides the agency's reasons supporting their determination that the Proposed Action is not expected to result in a significant impact on the environment. In accordance with Chapter 343, Hawaiʻi Revised Statutes and 11 Chapter 200.1, Hawaiʻi Administrative Rules, the project does not require preparation of an environmental impact statement and a finding of no significant impact is anticipated to be issued.

Attached documents (signed agency letter & EA/EIS)

- Wahikuli-Subdivision-GSS-Draft-EA_appendices.pdf
- Wahikuli-Subdivision-GSS-Draft-EA.pdf

ADA Compliance certification (HRS §368-1.5):

The authorized individual listed below acknowledges that they retain the responsibility for ADA compliance and are knowingly submitting documents that are unlocked, searchable, and not in an ADA-

compliant format for publication. The project files will be published without further ADA compliance changes from ERP, with the following statement included below the project summary in The Environmental Notice: "If you are experiencing any ADA compliance issues with the above project, please contact (agency submitting the project and phone and/or email)."

Action location map

- ProjectArea.zip

Authorized individual

Aaron Weieneth, AECOM

Email

aaron.weieneth@aecom.com

Phone

(617) 251-8304

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

AECOM

Draft Environmental Assessment for the Wahikuli Subdivision Gravity Sewer System

Volume 1
Lahaina, District of West Maui, County of Maui, Hawai‘i
TMK (2) 4-5-014, 4-5-027, 4-5-028, 4-5-030, 4-5-036

April 2025

Delivering a better world

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Prepared for:

United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

County of Maui
200 South High Street
Kalana O Maui Building
Wailuku, HI 96793

Prepared by:

AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

SWCA Environmental Consultants
1200 Ala Moana Boulevard #380
Honolulu, HI 96814

April 2025

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Preface

The National Environmental Policy Act (NEPA), 42 United States Code (U.S.C.) §§ 4321 et seq., requires federal agencies proposing to undertake a certain project to consider the environmental impacts of their proposed actions. The United States Environmental Protection Agency's (EPA's) implementing regulations for NEPA can be found at 40 CFR Part 6. A Federal agency's award of federal funds for a project may trigger the application of NEPA.

The planning and design of the Wahikuli Subdivision Gravity Sewer System is an activity managed by EPA and supported by Federal Emergency Management Agency (FEMA) funding through its mission assignment authority. Construction funds are not yet in place, and the project may be funded by both federal and state funds. EPA Region 9 has determined that NEPA requirements for the proposed project can be fulfilled by preparing an environmental assessment (EA) with a finding of no significant impact (FONSI).

Comparably, Hawai'i Revised Statutes (HRS) 343, as amended, and implementing rules under Hawai'i Administrative Rules (HAR) Chapter 11-200.1 (Environmental Impact Statement Rules) require state and local governmental agencies undertaking projects utilizing state or county lands or funds to consider the potential environmental impacts of a proposed project by preparing environmental review documentation. The Wahikuli Subdivision Gravity Sewer System may be constructed using state funds, including State of Hawai'i Department of Health (DOH) Clean Water State Revolving Fund Program funds. Based on HAR § 11-200.1-14, construction and use of the proposed project does not warrant the preparation of an environmental impact statement as the proposing agency, the County of Maui Department of Environmental Management, has not determined that the action may have a significant effect. Further, based on the findings and the assessment of potential impacts of the proposed project as set forth in HAR § 11-200.1-14 and documented in **Section 8.1.1** of this Draft EA, a FONSI is determined by the County (see **Section 8.1.2**).

Federal NEPA regulations at 40 CFR §§ 6.200 and 6.201 direct federal agencies to cooperate with state and local agencies to the fullest extent practicable to reduce duplication between NEPA and state and local requirements. Hawai'i law and regulations similarly direct agencies subject to HRS 343 to cooperate with federal agencies to the fullest extent possible (HRS § 343-5(h), HAR § 11-200.1-31(5)). This EA has been prepared to jointly meet the content and procedural requirements of both NEPA and federal cross-cutting authorities, and HRS 343, as amended.

Table of Contents

Figures

Tables

Appendices

Acronyms

ACHP	Advisory Council on Historic Preservation
AIS	archaeological inventory survey
ALISH	Agricultural Lands of Importance to the State of Hawai‘i
APE	area of potential effect
BMP	best management practice
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CSH	Cultural Surveys Hawai‘i, Inc.
CWSRF	Clean Water State Revolving Fund
dBA	decibel (A-weighted level)
DHHL	State of Hawai‘i Department of Hawaiian Home Lands
DOFAW	Division of Forestry and Wildlife
DOH	State of Hawai‘i Department of Health
EA	environmental assessment
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FONSI	finding of no significant impact
H_2S	hydrogen sulfide
HAR	Hawai‘i Administrative Rules
HHFDC	Hawai‘i Housing Finance and Development Corporation
HRS	Hawai‘i Revised Statutes
IPaC	Information for Planning and Consultation
IWS	individual wastewater system
LCA	land commission award
LCC	large capacity cesspool
MGD	million gallons per day
MPH	mile(s) per hour
MSL	mean sea level
NAAQS	National Ambient Air Quality Standard(s)
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
O_3	ozone
Pb	lead
PER	Preliminary Engineering Report
PHRI	Paul H. Rosendahl, Ph.D., Inc.
PiMCo	Pioneer Mill Co. Ltd.
$PM_{2.5}$	particulate matter with a diameter ≤ 2.5 micrometers
PM_{10}	particulate matter with a diameter ≤ 10 micrometers
SIHP	State Inventory of Historic Properties
SMH	sanitary manhole

SO_2	sulfur dioxide
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service

1. Summary

Project Name:	Wahikuli Subdivision Gravity Sewer System
Type of Document:	Draft Environmental Assessment (EA)
HRS §343-5 Trigger(s):	(1) Propose the use of County or State lands, and the use of State or County funds
Determination:	Anticipated Finding of No Significant Impact
Project Location:	Island of Maui, Hawai‘i Lahaina District
Recorded Fee Owner:	County of Maui State of Hawai‘i Approximately 231 private homeowners
Tax Map Key:	TMK plats (2) 4-5-014, (2) 4-5-027, (2) 4-5-028, (2) 4-5-030, and (2) 4-5-036.
Proposing County Agency:	County of Maui Department of Environmental Management 200 South High Street Kalana O Maui Building Wailuku, HI 96793
Proposing Federal Agency:	United States Environmental Protection Agency, Region 9 75 Hawthorne Street San Francisco, CA 94105
EA Preparers:	AECOM Technical Services, Inc. 1001 Bishop Street, Suite 1600 Honolulu, HI 96813 Contact: Jarrett Brown, PE, Project Manager Tel: 808.529.7248 SWCA Environmental Consultants 1200 Ala Moana Boulevard #380 Honolulu, HI 96814 Contact: Ryan Gross, RPA, Archaeology Project Manager Tel: 808.289.9230
Area:	94.6 acres
State Land Use Classification:	Urban District
County Zoning:	R3 Residential District, AG Agriculture District

Proposed Action:	The Proposed Action involves designing and constructing a gravity sewer system for the Wahikuli subdivision in Lahaina, on the Island of Maui, Hawai‘i. Final design of the project will be undertaken following completion of the EA. The proposed gravity sewer system would be installed in the County of Maui roadway rights-of-way and, as needed, easements across private property. It would avoid existing drainage culverts and waterlines servicing the Wahikuli subdivision. The system would connect to the existing Lahaina sewer system at the operational Lahaina No. 3 Pump Station. The proposed connection would be to one of the existing sanitary manholes (SMHs) on the mauka, eastern, side of Honoapi‘ilani Highway, State Route 30, depending on detailed analysis of the hydraulics during final design. The Proposed Action may involve installing sump or grinder pumps for certain properties where connecting to the sewer system via gravity is difficult due to grade differences. Additionally, easements may be necessary for constructing sewer laterals and County sewer lines for properties that do not have direct access to a public roadway. The need for sump or grinder pumps, and easements, will be assessed in the EA and confirmed during the design phase of the Proposed Action.
Impacts:	No significant impacts are anticipated from construction and operation of the proposed gravity sewer system for the Wahikuli subdivision.
Agencies Consulted – Pre-Assessment:	A total of 96 federal, state, and county agencies, elected officials, and organizations were consulted during the Draft EA Pre-Assessment Consultation process that took place during November 2024. At that time, approximately 250 additional letters to interested parties were sent to the Wahikuli subdivision homeowners.

2. Proposed Project Description

2.1 Background

The Wahikuli subdivision in Lahaina, on the Island of Maui, Hawai‘i was developed before the Lahaina sewer system was constructed in the mid- to late 1970s. The earliest portions of the subdivision, along Malo Street and a portion of Wahikuli Road, were built in the 1920s (Warren S. Unemori Engineering, Inc. 2013). The portion of the Wahikuli subdivision along Fleming Road and a portion of Wahikuli Road were subdivided in the 1940s. Development of the remaining portion of the subdivision, serviced by Kaniau Road and Malanai Street, was completed in the mid-1960s and early 1970s. Therefore, while each house lot in the Wahikuli subdivision currently is serviced by an individual cesspool or septic tank system, the surrounding area is connected to the Lahaina No. 3 Pump Station via gravity sewers, as illustrated by **Figure 2-1**. The wastewater is conveyed via the No. 3 Pump Station, force mains, gravity sewers, and the No. 2 and No. 1 Pump Stations to the Lahaina Wastewater Reclamation Facility, located approximately 2.8 miles north of the Project Area.

The County of Maui has been actively planning to expand sewer service to the Wahikuli subdivision. A 2013 Preliminary Engineering Report (PER) evaluated the feasibility of a gravity sewer system for the subdivision (Warren S. Unemori Engineering, Inc. 2013) (**Appendix A**).

On the evening of August 8, 2023, winds from Hurricane Dora rapidly spread wildfires, causing devastation in the westernmost area that burned an estimated 2,170 acres across the Island of Maui, Hawai‘i, including much of the community of Lahaina. Emergency response and recovery efforts have been ongoing between local government, the County of Maui, the State of Hawai‘i, and federal partners since that time. On January 13, 2024, the County of Maui requested technical assistance from the United States Environmental Protection Agency (EPA) for the planning and design of a proposed gravity sewer system to be constructed in the Wahikuli subdivision, which was impacted by the wildfires. This gravity sewer system is proposed to upgrade approximately 200 properties that are zoned for single-family use and are currently serviced by cesspools and septic systems.

2.1.1 Wahikuli Subdivision

The Wahikuli subdivision is located north of the Lahaina town center, on the western slopes and coastal plains of the Island of Maui, about 12 miles west of Wailuku, the county seat of the County of Maui. The subdivision is within the West Maui Community Plan Area, which aligns with the Lahaina Judicial District, and is located mauka, east, of Honoapi‘ilani Highway, State Route 30, along the shoreline of the ‘Au‘au Channel in the Pacific Ocean. The community generally slopes at natural grades of approximately 5 to 10 percent in an east-to-west, makai, direction, from an elevation of about 130 feet above mean sea level (MSL) at its northeastern property line to approximately 10 feet above MSL at the highway.

Figure 2-2 shows the location of the approximately 94.6-acre Project Area, including the Wahikuli subdivision. The subdivision is bordered by the Villages of Leiali‘i Phase I-A to the north, the Ka La‘i Ola temporary housing project site and the Kilohana temporary group housing site to the east, the single-family residential Wahikuli Terrace subdivision to the south, and Honoapi‘ilani Highway and Wahikuli Wayside Park to the west. The Federal Emergency Management Agency (FEMA) is providing temporary group housing in the form of approximately 169 alternative transportable temporary housing units on 36 acres at the Kilohana temporary group housing site, for eligible disaster victims displaced by the wildfires in Lahaina (FEMA 2024a). The State of Hawai‘i, the County of Maui, and nonprofit organization partners are developing Ka La‘i Ola, a temporary housing development that will provide 450 modular residential units on 54 acres to house, for up to 5 years, wildfire survivors who are ineligible for FEMA aid (State of Hawai‘i 2024). Both the Kilohana group housing and the Ka La‘i Ola housing development are being connected to the existing Lahaina sewer system and the Lahaina Wastewater Reclamation Facility.

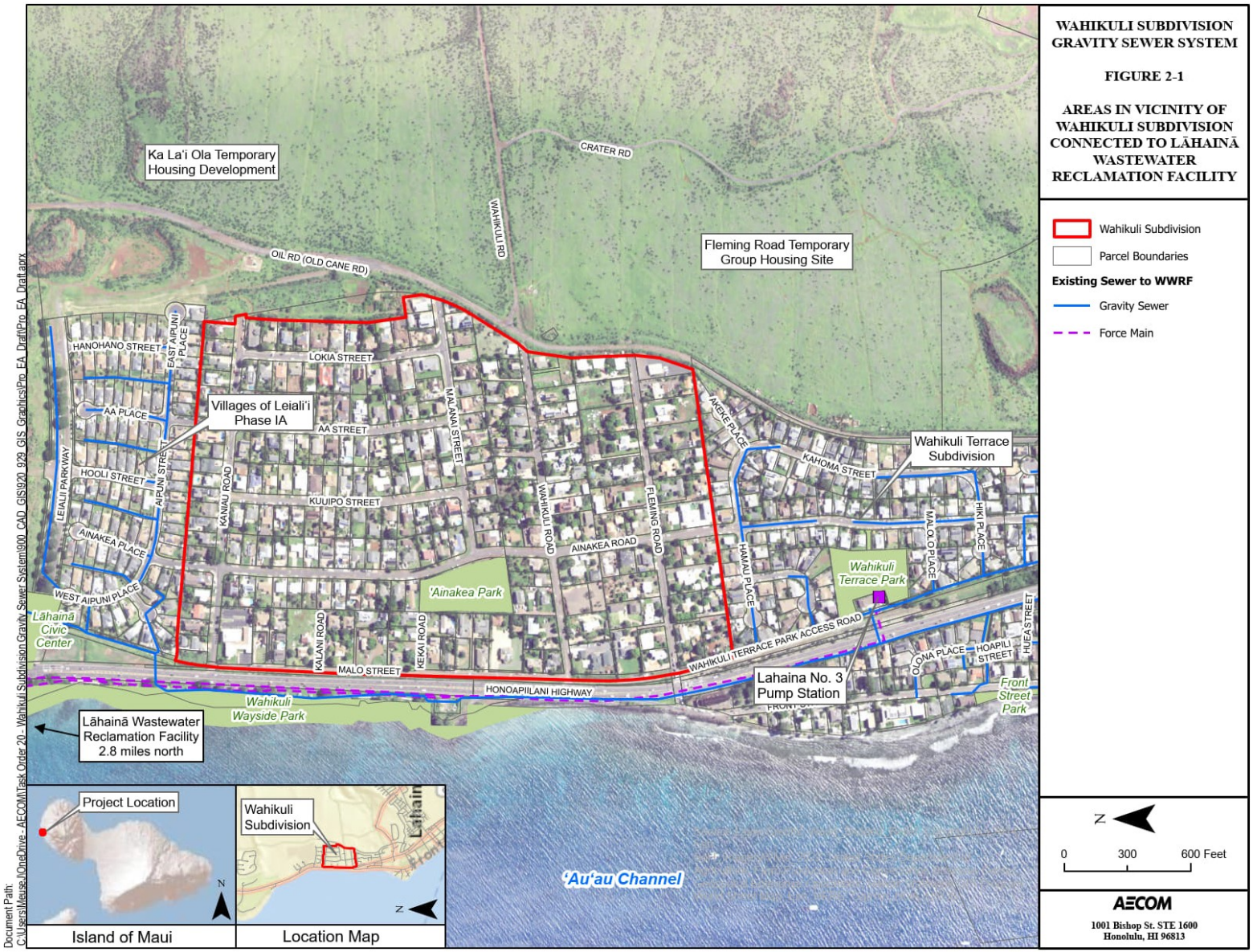

Figure 2-1. Areas in Vicinity of Wahikuli Subdivision Connected to Lahaina Wastewater Reclamation Facility

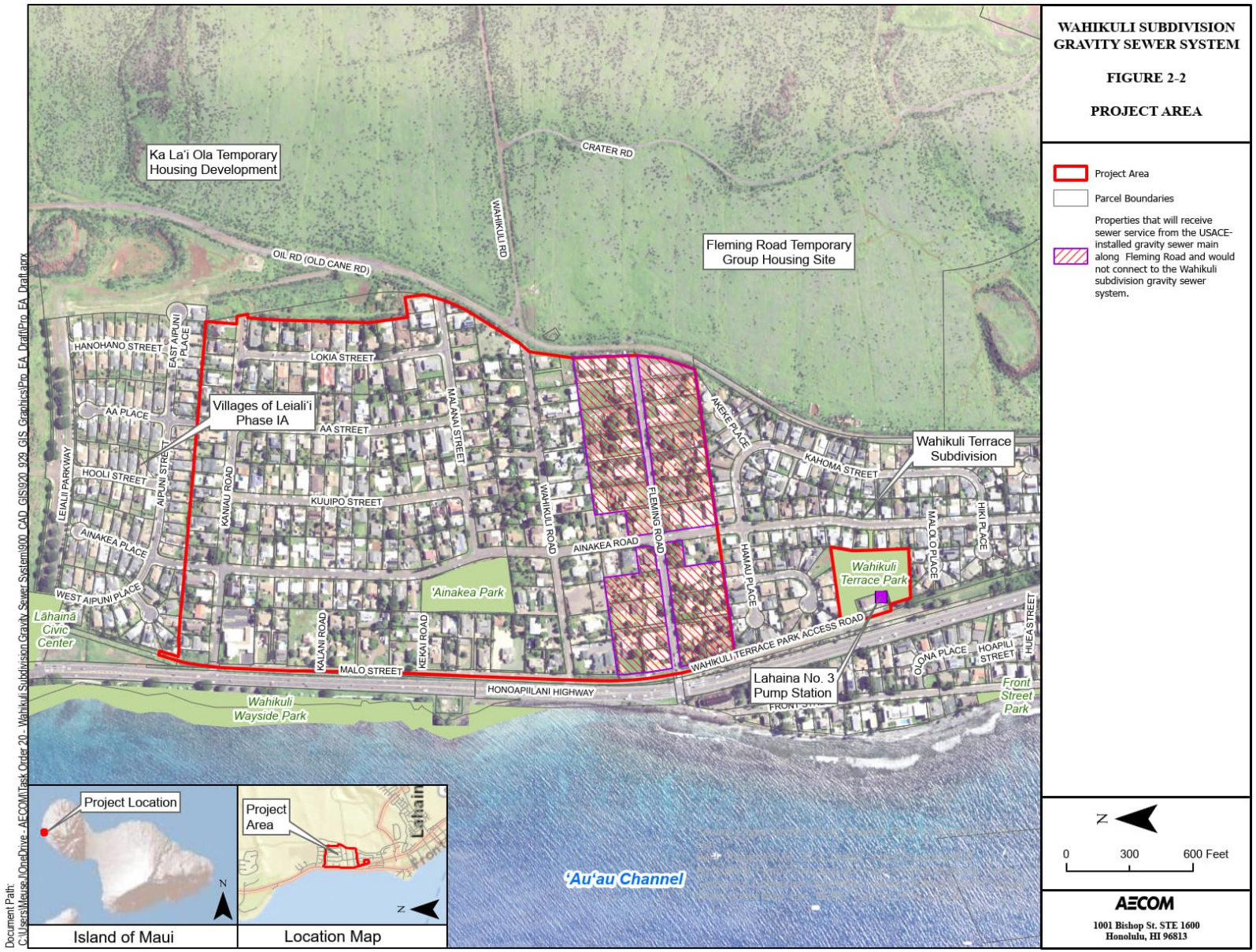

Figure 2-2. Project Area

2.1.2 Cesspools

Cesspools are used throughout the State of Hawai‘i, Maui County, and the Project Area for the disposal of untreated sanitary waste. The geology and terrain of the Island of Maui makes it expensive to build sewer connections and, within the Project Area, the County of Maui presently does not provide any wastewater collection and treatment facilities.

Cesspools are shallow, underground systems for disposing of sanitary wastewater. Typically unlined, with an open bottom and/or perforated sides, cesspools receive untreated wastewater but are not designed to treat sanitary waste. Rather, cesspools retain, or are designed to retain, the solids in wastewater discharged into them, while allowing the liquid to seep through their bottoms or sides. The pollutants in untreated wastewater from cesspools are released into the environment, discharged at depths below the ground surface that bypass the potential for natural remediation of wastewater contaminants (State of Hawai‘i Department of Health (DOH) 2017). The subsurface zone to which the liquid waste is discharged may be hydraulically connected to groundwater and surface water.

Cesspools are a dated, substandard sewage disposal method and their use, especially where many are located in close proximity, presents a risk to human health and the environment (DOH 2017, 2021; Mezzacapo and Shuler 2022). According to DOH (2017), the effluent from cesspools poses a significant risk:

> Cesspool wastewater is untreated and contains pathogens, bacteria and viruses that may spread disease. Additionally, cesspool effluent contains nutrients, like nitrogen and phosphorous, that can disrupt the sensitive ecosystems of Hawai‘i, including harming nearshore coral reefs.

2.1.2.1 Federal Requirements

The EPA’s mission is to protect human health and the environment. In 1999, EPA promulgated regulations under the Safe Drinking Water Act’s Underground Injection Control (UIC) Program that prohibited the construction of new large capacity cesspools (LCCs) as of April 2000 and required the closure of all existing LCCs by April 5, 2005 (40 CFR § 144.88). Under these federal regulations, a LCC is a cesspool that serves multiple dwellings, or for non-residential facilities has the capacity to serve 20 or more persons per day. The UIC requirements do not apply to single-family residential cesspools nor to non-residential cesspools which receive solely sanitary waste and have the capacity to serve fewer than 20 persons a day.

2.1.2.2 State Requirements

In 2017, the Hawai‘i State Legislature passed Act 125, which required that by January 1, 2050, all cesspools in the State, unless granted exemption, shall upgrade or convert to a septic or aerobic treatment unit, or connect to a sewer system. In 2022, Act 125 was amended by Act 87, which expands the candidate individual wastewater systems (IWSs) to include any wastewater system approved by DOH. This legislation pertains to all house lots in the Wahikuli subdivision served by cesspools, including small capacity cesspools that typically serve individual homes and are not regulated under federal law.

The *2022 Hawai‘i Cesspool Hazard Assessment & Prioritization Tool: 2022 Updated Report & Technical Appendices* (Mezzacapo and Shuler 2022) categorizes cesspools based on potential harm to humans and the environment. The tool uses a geospatial hazard-based model that integrates multiple types of risks to visualize, assign, and rank each factor at the individual cesspool level and collectively for appropriate management. Because cesspool pollution is nonpoint in nature, the tool groups cesspools collectively by census tracts into the following three prioritization categories:

- Priority Level 1: Greatest contamination hazard;
- Priority Level 2: Significant contamination hazard; and
- Priority Level 3: Pronounced contamination hazard.

The *2022 Updated Report & Technical Appendices* (Mezzacapo and Shuler 2022) designates the census tract within which the Project Area is located as Priority Level 1, greatest contamination hazard.

In its *Final Report to the 2023 Regular Session Legislature*, the Cesspool Conversion Working Group (DOH 2022) recommends adjusting the deadline by which cesspools must be upgraded, converted, or connected to a staggered timeline. The timeline would accelerate the mandatory conversion date for cesspools that pose the highest risk, as determined by the Hawai‘i Cesspool Prioritization Tool and supporting water quality data. Specifically, the working group recommends replacing the 2050 deadline mandated by Act 125 (2017) with the following deadlines:

- Priority Level 1 converted by 2030;
- Priority Level 2 converted by 2035; and
- Priority Level 3 converted by 2050.

2.1.2.3 County Requirements

Maui County Code § 14.21A.010 requires owners of all dwellings that are used for human occupancy and abut on any street, alley, or right-of-way in which a public wastewater system is located to establish a direct connection with the system within 180 days after the date of official notice.

2.1.3 Project Funding

The planning and design of the Wahikuli Subdivision Gravity Sewer System are supported by FEMA funds through its mission assignment authority and managed by EPA through its contractor, General Dynamics Information Technology (GDIT), Inc. The FEMA funding is through Robert T. Stafford Disaster Relief and Emergency Assistance Act, or “Stafford Act” (codified as amended at 42 United States Code (U.S.C.) § 5121 et seq.). Construction funds are not yet in place.

The project may be funded by both federal and state funds, including the State of Hawai‘i DOH Clean Water State Revolving Fund (CWSRF) Program. The CWSRF Program was created by the Federal Water Quality Act of 1987 and authorizes low-interest loans for the construction of publicly owned wastewater treatment works. In 1988, the Hawai‘i State Legislature passed Act 365, now Chapter 342D of the Hawai‘i Revised Statutes (HRS), to establish the State Water Pollution Control Revolving Fund to receive the federal capitalization grant. HRS 342D, Part V (Water Pollution Control Financing), and, more specifically, HRS § 342D-81 set forth that the State’s policy is to promote water pollution prevention and control, including the use of recycled water, by financing eligible projects consistent with applicable federal and state laws. The State Revolving Fund receives annual funding from EPA, which DOH is then responsible for allocating among eligible projects. The County of Maui has also requested construction funding for this project under the Water Resources Development Act, which authorizes the United States Army Corps of Engineers (USACE) to assist non-federal interests in carrying out water-related environmental infrastructure, and resource protection and development projects, should such funds become available. Additionally, the County of Maui has requested United States Department of Agriculture Rural Development Disaster Assistance Funds for the construction of this project.

2.2 Purpose and Need for Action

The Wahikuli subdivision consists of approximately 200 single-family house lots, each currently serviced by a cesspool or a septic system. Upgrading these properties to a gravity sewer system would eliminate environmental impacts from cesspools and leaking septic systems while providing a wastewater management system more resilient to disaster hazards from wildfires, flooding, and tsunami. The proposed project would improve wastewater management to protect human health, nearshore waters, and coral reefs while minimizing the seepage of pollutants from the cesspools into the Class A waters along Wahikuli Wayside Park. It also seeks to safeguard natural and cultural areas that are important to local communities and watersheds. Furthermore, this project would support broader recovery efforts by promoting economic development and reviving land values.

Implementing the proposed gravity sewer system would also facilitate compliance with State of Hawai'i Act 125 of 2017, as amended by Act 87 of 2022, which requires that by January 1, 2050, all cesspools in the State, unless granted exemption, shall upgrade or convert to a wastewater system approved by the State of Hawai'i DOH, or connect to a sewer system.

The purpose of the Proposed Action is to enable the individual residents of the Wahikuli subdivision to connect to a sewer system and properly abandon their cesspool or septic system in compliance with applicable requirements. The need for action is driven by the public health and environmental concerns associated with cesspools, as described in **Section 2.1.2**, as well as the need for disaster resiliency.

2.3 Proposed Action (Preferred Alternative)

The Proposed Action involves designing and constructing a gravity sewer system for the Wahikuli subdivision and builds on the 2013 PER (Warren S. Unemori Engineering, Inc. 2013) (**Appendix A**) that evaluated the feasibility of a gravity sewer system for the subdivision. This environmental assessment (EA) largely relies on design information included in the 2013 PER. The Proposed Action is the Preferred Alternative identified in the PER, supplemented by findings from a preliminary assessment of the proposed project undertaken in 2024. Final design of the project will be undertaken following completion of the EA.

The proposed gravity sewer system would be installed in the County of Maui roadway rights-of-way and as needed, easements across private property. It would avoid existing drainage culverts and waterlines servicing the Wahikuli subdivision. As described in the PER, the system would connect to the existing Lahaina sewer system at the operational Lahaina No. 3 Pump Station located approximately 975 feet south of Fleming Road. The PER anticipated that the proposed connection would be to the existing sanitary manhole (SMH) #10 directly in front of the wet well for the pump station, on the mauka, eastern, side of Honoapi'ilani Highway. The wastewater from the Wahikuli subdivision would be conveyed via the No. 3 Pump Station, force mains, gravity sewers, and the No. 2 and No. 1 Pump Stations to the Lahaina Wastewater Reclamation Facility.

Based on the Wastewater Flow Standards of the County of Maui Wastewater Reclamation Division (2006), the 231 single-family house lots in the Wahikuli subdivision would generate a design average flow of 0.075 million gallons per day (MGD), a design maximum flow of 0.192 MGD, and a design peak flow of 0.304 MGD[1]. The Lahaina Wastewater Reclamation Facility currently has a capacity of 9.0 MGD and receives an average wastewater flow of approximately 3.2 MGD for treatment and disposal of by underground injection or further treatment for reuse (personal communication with the Capital Improvements Programs Coordinator, County of Maui Wastewater Reclamation Division).

To provide sewer service to the temporary group housing being constructed at the Kilohana temporary group housing site (FEMA 2024a), the USACE, on behalf of FEMA, has installed a gravity sewer main underground along the length of Fleming Road and a segment of Wahikuli Terrace Park Access Road within the Project Area. The sewer main along this alignment, included in the Preferred Alternative identified in the PER, therefore, would not be installed under the Proposed Action for the Wahikuli Subdivision Gravity Sewer System. Approximately 30 single-family house lots, among the 231 Wahikuli subdivision lots, will connect to the USACE-installed gravity sewer main along Fleming Road, as shown on **Figure 2-2**. The Fleming Road main was designed and constructed with adequate capacity to convey additional wastewater flows from other parts of Wahikuli (FEMA 2025).

The USACE also replaced SMH #10 and other manholes upstream along Wahikuli Terrace Park Access Road and Malo Street. The Proposed Action would connect to one of the new manholes, depending on detailed analysis of the hydraulics during final design. The Project Area shown in **Figure 2-2** comprises the Wahikuli subdivision where gravity sewer lines and laterals would be installed, the section of Malo

[1] The design **average** flow is the sum of the average wastewater flow and the applicable dry weather infiltration/inflow rate, and the design **maximum** flow is the sum of the maximum wastewater flow and the applicable dry weather infiltration/inflow rate. The design **peak** flow is the sum of the design maximum flow and the wet weather infiltration/inflow rate.

Street that would be used to connect the sewer system to the Lahaina No. 3 Pump Station, and the Lahaina No. 3 Pump Station property and Wahikuli Terrace Park that might be used as staging areas.

The Proposed Action may involve installing sump or grinder pumps for certain properties where connecting to the sewer system via gravity is difficult due to grade differences. Such situations can arise when a property's private sewer line is lower in elevation than the sewer system in the adjacent roadway. Additionally, easements may be necessary for constructing sewer laterals and County sewer lines for properties that do not have direct access to a public roadway. Both activities would occur on private property. The need for sump or grinder pumps, and easements will be assessed in the EA and confirmed during the design phase of the Proposed Action.

All construction staging, including the storage of equipment and vehicles, stockpiles, waste bins, and other construction-related materials, would occur within the Project Area.

2.4 No-Action Alternative

Under this alternative, a gravity sewer system for the Wahikuli subdivision would not be implemented. All property owners would need to upgrade or convert to an IWS approved by the DOH by January 1, 2050, to comply with Act 125, as amended by Act 87, unless granted an exemption. Thereafter, the property owners would be responsible for operating, maintaining, and servicing the IWSs.

The proposed gravity sewer system is preferred versus IWSs under the No-Action Alternative for the following reasons:

- The proposed sewer system would be operating before most individual homeowners comply with the phase-out of cesspools by installing DOH-approved IWSs. Construction of the gravity sewer system could begin as early as Winter 2026-27 and take approximately 12 months to complete. Each Wahikuli subdivision property owner would manage the tying in of their property to the new sewer system, although Maui County Code § 14.21A.010 would require that they establish a direct connection with the system within 180 days after the date of official notice. Conversely, there is no incentive for homeowners to comply with the 2050 deadline mandated by Act 125 in the short term, rather than deferring until later.
- In the interim, Wahikuli subdivision cesspools and septic systems, especially malfunctioning septic systems, would continue to release leachate to the environment. Unlike cesspools, septic systems, with engineered leach fields and regular maintenance, provide anaerobic treatment of waste, and remove most pathogens and some level of nutrients (Mezzacapo et al. 2020). However, cesspools and other IWSs, especially those that are poorly maintained or malfunctioning, negatively impact water resource quality, coral reefs, and human health (Mezzacapo et al. 2020).
- Homeowners would need to maintain the IWSs, which can be fraught with problems, including those related to the cost of maintenance. Carollo Engineers, Inc. (2021) estimated that, without financial assistance, approximately 98 percent of Maui cesspool homeowners would be challenged to afford cesspool conversion, comprising monthly IWS installation loan repayment costs and monthly operation and maintenance costs. Inadequate or delayed maintenance could result in malfunctioning systems, along with attendant adverse impacts to the environment and human health.
- The long-term cost to homeowners for sewers is anticipated to be less than for IWSs. Operating and maintaining IWSs would be costly for homeowners, as would be contributing, as bill payers, to the cost of operating and maintaining a County wastewater system. However, Carollo Engineers, Inc. (2021) estimated that, in Maui County, typical average monthly sewer service charges for wastewater collection and treatment are lower, and in some cases substantially lower, than monthly IWS installation loan repayment costs.
- Connecting the Wahikuli subdivision to the existing Lahaina sewer system and wastewater reclamation facility would increase the amount of recycled water potentially available for reuse

providing there is sufficient demand for R-1 water[2]. The reuse of recycled water would promote beneficial water resource management in Hawai‘i, an island state with very limited freshwater resources. During the years 2015 through 2022, the use of recycled water in the County of Maui has ranged between 3.1 and 4.0 MGD, with 3.9 MGD reused in 2022 (DOH 2025).

2.5 Alternatives Considered but Not Carried Forward

An alternative tie-in to the Lahaina No. 3 Pump Station was identified in the 2013 PER (Warren S. Unemori Engineering, Inc. 2013) (**Appendix A**). This alternative involves tying into the existing SMH #1A immediately south of the abandoned, original Lahaina No. 3 Pump Station on the makai, western, side of the Honoapi‘ilani Highway. SMH #1A connects to an existing 18-inch PVC gravity sewer line that flows south toward Lahaina Town, then crosses the highway eastward to SMH #10 in front of the operational pump station. However, this alternative was not preferred and has been eliminated from further consideration due to greater associated impacts and other disadvantages, including:

- Additional dewatering needs from Malo Road/Kekai Road intersection to SMH #1A across Honoapi‘ilani Highway;
- Need to obtain an easement from property owned by the State of Hawai‘i;
- Need to cross the historic right-of-way and tracks of the Lahaina, Kā‘anapali, and Pacific Railroad Sugar Cane Train;
- Need to cross the four-lane Honoapi‘ilani Highway, requiring a traffic control plan, State of Hawai‘i Department of Transportation approval, Maui Police Department Traffic Division participation, and public inconvenience, potentially including lane closures, detours on local roadways, and resulting traffic delays; and
- Potential, additional permitting requirements.

2.6 Other Considerations

Construction of the portions of the sewer system located within County rights-of-way would not require further land transfer approvals. Portions of the planned system would be located within existing State of Hawai‘i sewer and drainage easements on privately owned properties. To use these easements for the new sewer system, they would need to be transferred from the State to the County of Maui.

2.7 Project Schedule and Implementation

The Final EA for the Wahikuli Subdivision Gravity Sewer System is anticipated to be issued in July 2025. Final design of the project will be undertaken following completion of the EA, with the final design anticipated to be completed in February 2026.

The work related to constructing the gravity sewer system would need to be executed in the following steps:

- Bidding and award;
- Construction of wastewater improvements; and
- Startup and commissioning.

The County of Maui would manage the construction implementation schedule. Construction could begin as early as Winter 2026-27 and take approximately 12 months to complete. Each Wahikuli subdivision property owner would manage the tying in of their property to the new sewer system.

[2] Under the State of Hawai‘i Reuse Guidelines (DOH 2016a, 2016b), for R-1, the highest grade of recycled water, wastewater undergoes oxidation, filtration, and disinfection.

3. Description of Existing Conditions, Impacts, and Mitigation Measures

3.1 Climate

3.1.1 Existing Conditions

The Island of Maui has a low temperature variability with average temperatures ranging from 72.2°F in February to 80.3°F in August (National Oceanic and Atmospheric Administration (NOAA) 2025). The island is characterized by two distinct regions that experience markedly different levels of precipitation, despite their close proximity. These regions are the leeward side and the windward side. Rainfall in West Maui, on the leeward side, is characterized by steep gradients with increasing altitude, ranging from about 366 inches at Puʻu Kukui to less than 50 inches in coastal areas (County of Maui Department of Water Supply 2019).

Lahaina's climate is distinct from the predominantly tropical conditions found throughout the rest of Maui. NOAA designates the southern portion of West Maui as a hot semi-arid climate zone. Lahaina Town is located in West Maui at the base of Puʻu Kukui, the volcanic peak of Mauna Kahālāwai, also known as the West Maui Mountains. The steep West Maui Mountains block prevailing northeast trade winds, causing abundant rain on the north and northeastern sides, the windward side. This creates a rain shadow over the western and southern portions of West Maui, resulting in Lahaina having a drier climate with higher daytime temperatures.

Lahaina typically receives approximately 15 inches of annual precipitation, with the highest average, monthly rainfall occurring in January (State of Hawaiʻi Department of Land and Natural Resources 1986). The Hawaiʻi Climate Data Portal maintains a rainfall gauge at Lahainaluna, near the Lahaina Water Treatment Facility. In 2022, the most recent year with all 12 months recorded, the Lahainaluna rainfall gauge recorded a total annual precipitation of around 8.73 inches (University of Hawaiʻi 2025).

In the coming decades, West Maui is expected to face significant climate-related stresses. Key climate stressors anticipated to increase for West Maui include longer periods of drought, warmer air temperatures, and an increase in extreme weather events such as storms (Pacific Islands Climate Change Cooperative 2016). Additionally, global sea levels are expected to rise at a rate of approximately 0.17 inches per year, causing water from high tides or heavy rain events to extend further into coastal areas, including in West Maui (NASA 2025).

3.1.2 Impacts and Mitigation Measures

As discussed in **Section 3.14.2**, construction- and operation-related air pollutants would be emitted under the Proposed Action. These emissions would include the release of greenhouse gases and are expected to be minor and to not contribute substantially to emissions from the Wahikuli subdivision.

Although a narrow strip of the Project Area is located within the projected sea level rise boundaries (**Figure 3-1**), sea level rise is not expected to impact the proposed project as the gravity sewer system would be located underground. Similarly, key climate stressors that are anticipated to affect West Maui are unlikely to impact the proposed gravity sewer system due to its underground construction.

The new infrastructure under the Proposed Action would be more resilient, as it would replace existing cesspools and septic systems that are more vulnerable to flooding and increased soil saturation. Some nominal inflow of stormwater into wastewater collection systems through manhole covers and other hydraulic pathways is normal and can be expected to increase with increasing storm intensity in the future. Because the proposed gravity sewer system would not intercept stormwater flows, there is unlikely to be a direct impact on stormwater inflow to the Lahaina sewer system and the Lahaina Water Reclamation Facility. Hazards related to hurricanes, such as wind, rain, and flood loads, would be taken into account during detailed design. Applicable regulations and standards, including the Hawaiʻi State Building Code, would be adhered to.

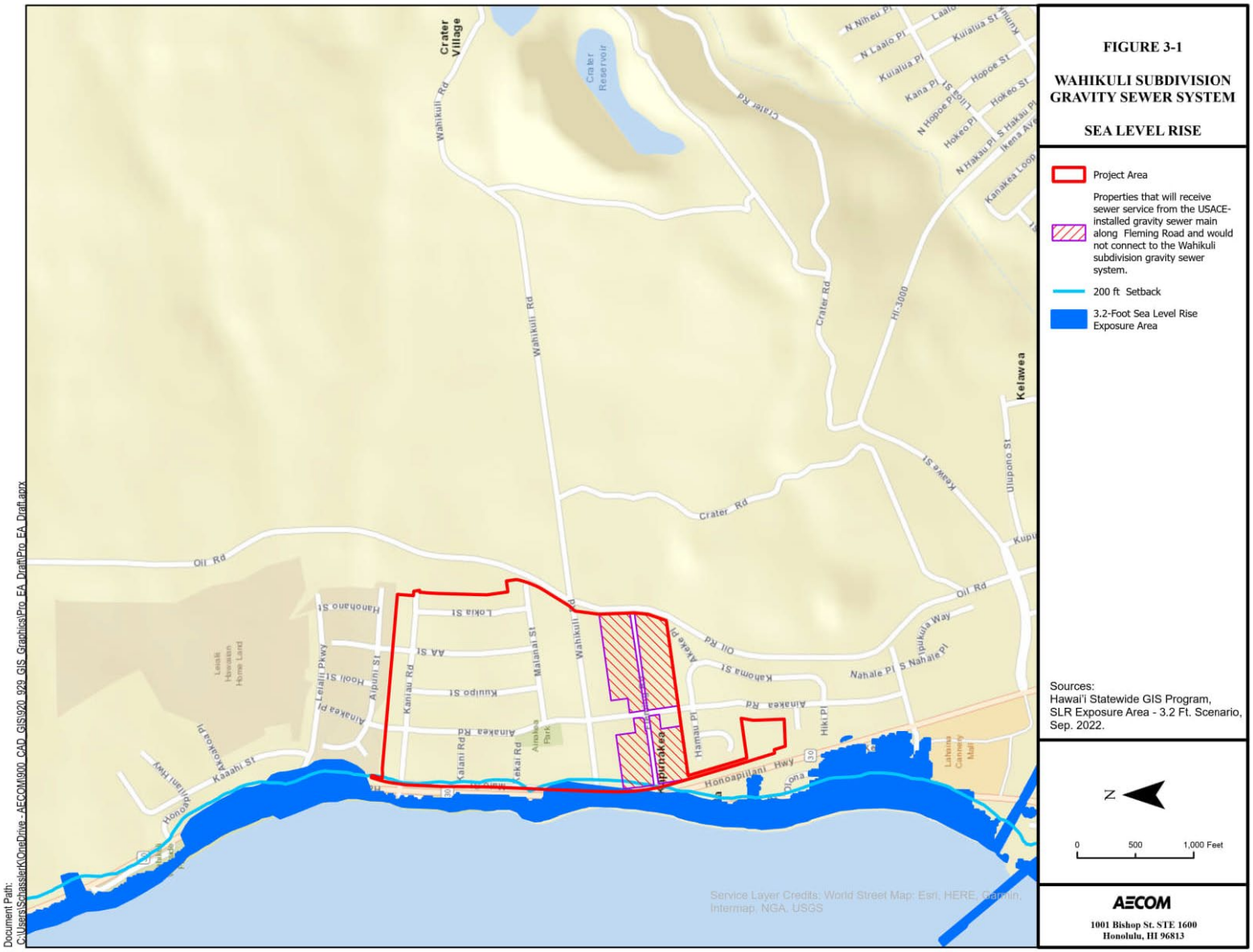

Figure 3-1. Sea Level Rise

3.2 Topography

3.2.1 Existing Conditions

West Maui is a string of coastal communities and mountainous areas. The elevation ranges from sea level to 5,788 feet at the summit of Puʻu Kukui, the volcanic peak of the West Maui Mountains. The area is a deeply dissected volcanic formation with significant erosion marked by numerous steep walled canyons and rugged ridges (Stearns & Macdonald 1942). Areas that are more gently sloped only occur near to the coast (Maui County Soil & Water Conservation Districts 2025). West Maui has a gently arcing convex coast. From south to north, the shoreline changes exposure from southwesterly, to westerly, to northwesterly.

The approximately 94.6-acre Project Area, which encompasses the Wahikuli subdivision, is located in Lahaina in West Maui at the western base of the West Maui Mountains. The subdivision generally slopes at natural grades of approximately 5 to 10 percent in an east-to-west, makai, direction, from an elevation of about 130 feet above mean sea level (MSL) at its northeastern property line to approximately 10 feet above MSL at the Honoapiʻilani Highway, State Route 30 (**Figure 3-2**).

3.2.2 Impacts and Mitigation Measures

Construction of the proposed new gravity sewer system would require open trench excavation for the installation of sewers throughout the Wahikuli subdivision, except along the length of Fleming Road and Wahikuli Terrace Park Access Road where the United States Army Corps of Engineers (USACE) has installed a gravity sewer main. Trenches for the gravity sewer lines would typically be about 3 feet wide, and the depth of trenching would range from 4 to 14 feet below grade. Due to the existing topography, several locations may also require installation of sump or grinder pumps.

Once construction is complete, trenches would be backfilled and grade levels above the sewer lines would be restored resulting in only negligible, localized potential impacts to the site topography.

3.3 Geology

3.3.1 Existing Conditions

The Island of Maui consists of two separate volcanoes, the West Maui Volcano (Mauna Kahālāwai) and the East Maui Volcano (Haleakalā). The West Maui Mountains and West Maui Volcano are the remnants of the initial shield volcano that formed under at least three separate volcanic series events; the Wailuku volcanic series, the Honolua series, and the Lahaina volcanic series.

The initial Wailuku volcanic series makes up about 97 percent of the volcano's volume. The Wailuku Basalt consists mainly of tholeiitic basalt from the shield age, including olivine basalts, olivine-poor basalts, hypersthene basalts, and picritic basalts. The shield volcano formed during this series eventually collapsed to form a caldera, which was later overlain by the Honolua volcanic series (Sherod et al. 2021). The boundary between the Wailuku and Honolua series is marked by a soil horizon of up to two meters thick (Sinton 1979).

Since the cessation of Honolua volcanism, West Maui underwent profound erosion, which continues to this day. The volcano was again briefly active for a short time and resulted in four separate eruptions on the western and southern slopes of the West Maui Mountains. These deposits are named the Lahaina volcanic series (Lahaina Volcanics) for the town where the most extensive of the lava flows is exposed. The rejuvenated-stage volcanic rocks of the Lahaina Volcanics are represented by four cinder and spatter cones and associated basanitic lava flows found on the west, southwest, and southeast sides of the West Maui Volcano (Sherod et al. 2021).

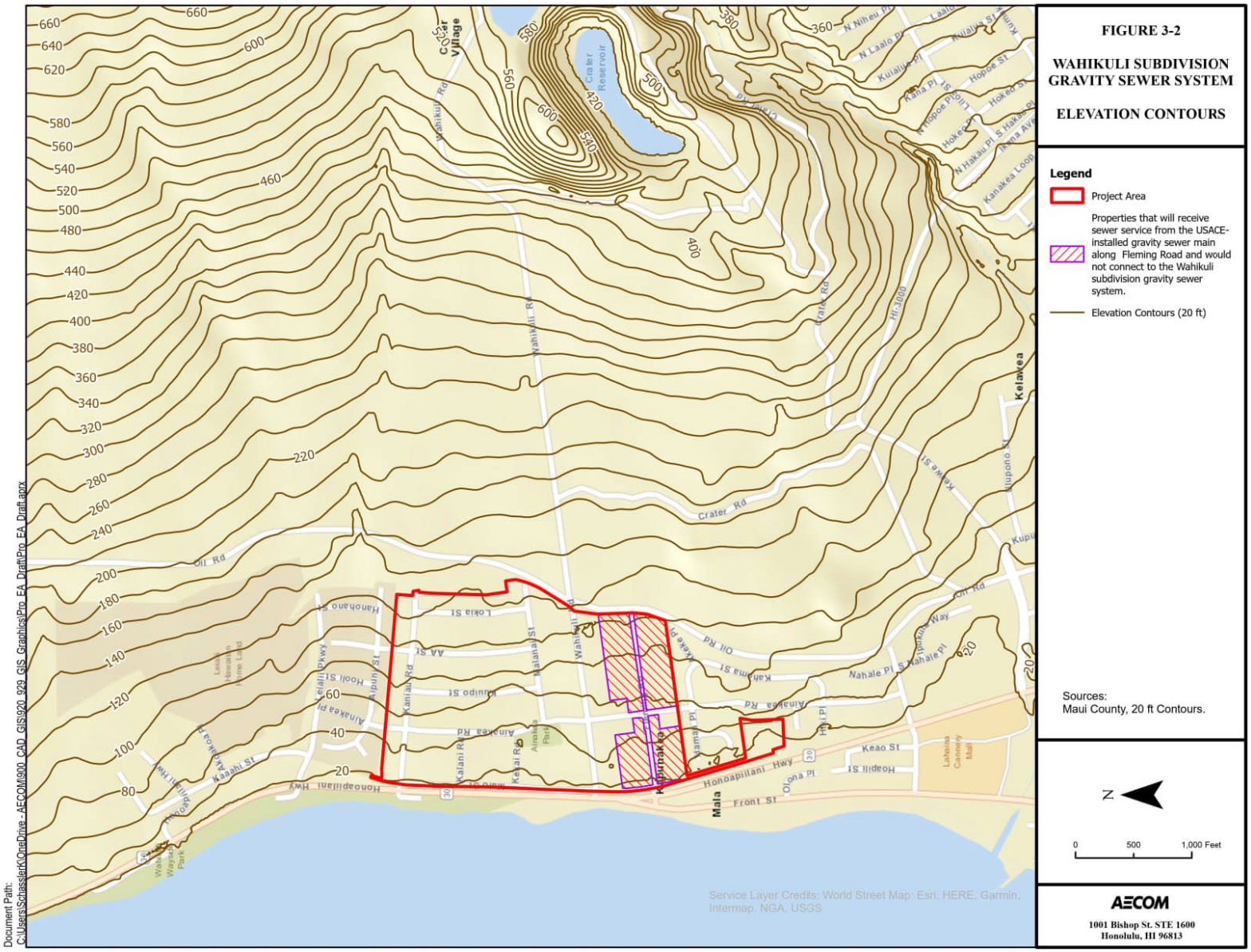

Figure 3-2. Elevation Contours

The Project Area is situated at the western base of the West Maui Mountains, adjacent to the ʻAuʻau Channel, on the northern side of Lahaina. The United States Geological Survey (USGS) created a Geological Map of the State of Hawaiʻi in 2021, to provide detailed insights into the diverse geological features of the Hawaiian Islands. According to this map, the entirety of the Project Area is located on top of lava flows (Qlhl) from the Lahaina volcanic series. This lava is comprised of thick ʻaʻā lava flows which form a volcanic terrain that has a rough and usually spinose surface with a dense interior (Sherod et al. 2021).

In 2013 a geotechnical subsurface investigation was performed. The investigation sampled three boring locations along Malanai Street as five additional borings along Malo Street to assess the typical depth to bedrock. According to the report, along Malanai Street fresh formational gray basalt was encountered from a depth of four to six feet. The basalt was generally hard and occasionally broken over its upper three-to-five-foot depths and massive below (Warren S. Unemori Engineering, Inc. 2013).

3.3.2 Impacts and Mitigation Measures

During construction of the Proposed Action, bedrock may be encountered during excavation. Removal would be accomplished using methods consistent with other construction activities on the Hawaiian Islands. Standard local practice for encountering underground cavities during excavation would also be consistent with other construction activities on the Hawaiian Islands. Grading, excavating, and fill activities during construction of the gravity sewer system and resulting connections are expected to occur no deeper than approximately 14 feet below grade and thus would have negligible impacts on the geology in the Wahikuli subdivision and Lahaina area.

3.4 Seismic Hazard

3.4.1 Existing Conditions

Maui's potential natural hazards include earthquakes or seismic hazards that can often result in landslides, ground cracks, rockfalls, and tsunamis (County of Maui Panning Department 2012). The USGS maps show Maui County as having a moderate to high seismic risk, measured using the Richter Scale (County of Maui Emergency Management Agency 2020). However, Maui County usually experiences shaking from earthquakes associated with volcanic activity that are too small to cause damage. These small earthquakes, or swarms, are located around the Haleakalā volcano in eastern Maui (County of Maui Emergency Management Agency 2020). There are several faults in Maui County including the West Maui Fault, East Molokaʻi Fault, and an extensive fault system on Lānaʻi.

The intensity of an earthquake is measured by the USGS peak ground acceleration, or the probability that ground motion will reach a certain level during an earthquake. Peak ground acceleration is expressed as 'g', the acceleration of gravity. A higher Peak ground acceleration means more shaking and is frequently stated as a percent probability of exceedance within a given time period (County of Maui Emergency Management Agency 2020). The USGS National Seismic Hazard Model for the State of Hawaiʻi was updated in 2021 after incorporating new data and modeling techniques. The model results are shown in **Figure 3-3**, expressed as 2 percent probability of exceedance in 50 years, the peak ground acceleration within the Project Area lies within 0.5 to 0.6g (USGS 2021). Ground motions are highest in the southern portion of the Island of Hawaiʻi and lessens to the northwest, but in general, the model shows significant chances of slight or greater damaging ground motions across most the Hawaiian Islands (USGS 2021).

Seismic activity, or subduction earthquakes, cause over 95 percent of tsunamis (County of Maui Emergency Management Agency 2020). Low-lying coastal areas are at the highest risk of tsunamis. NOAA has mapped tsunami evacuation zones within the Project Area (**Figure 3-4**). Portions of the Project Area are mapped as within a tsunami evacuation zone and other portions are within an extreme tsunami evacuation zone. The northeast corner of the Project Area east of Aa Street and north of Malanai Street lies beyond the mapped tsunami evacuation areas.

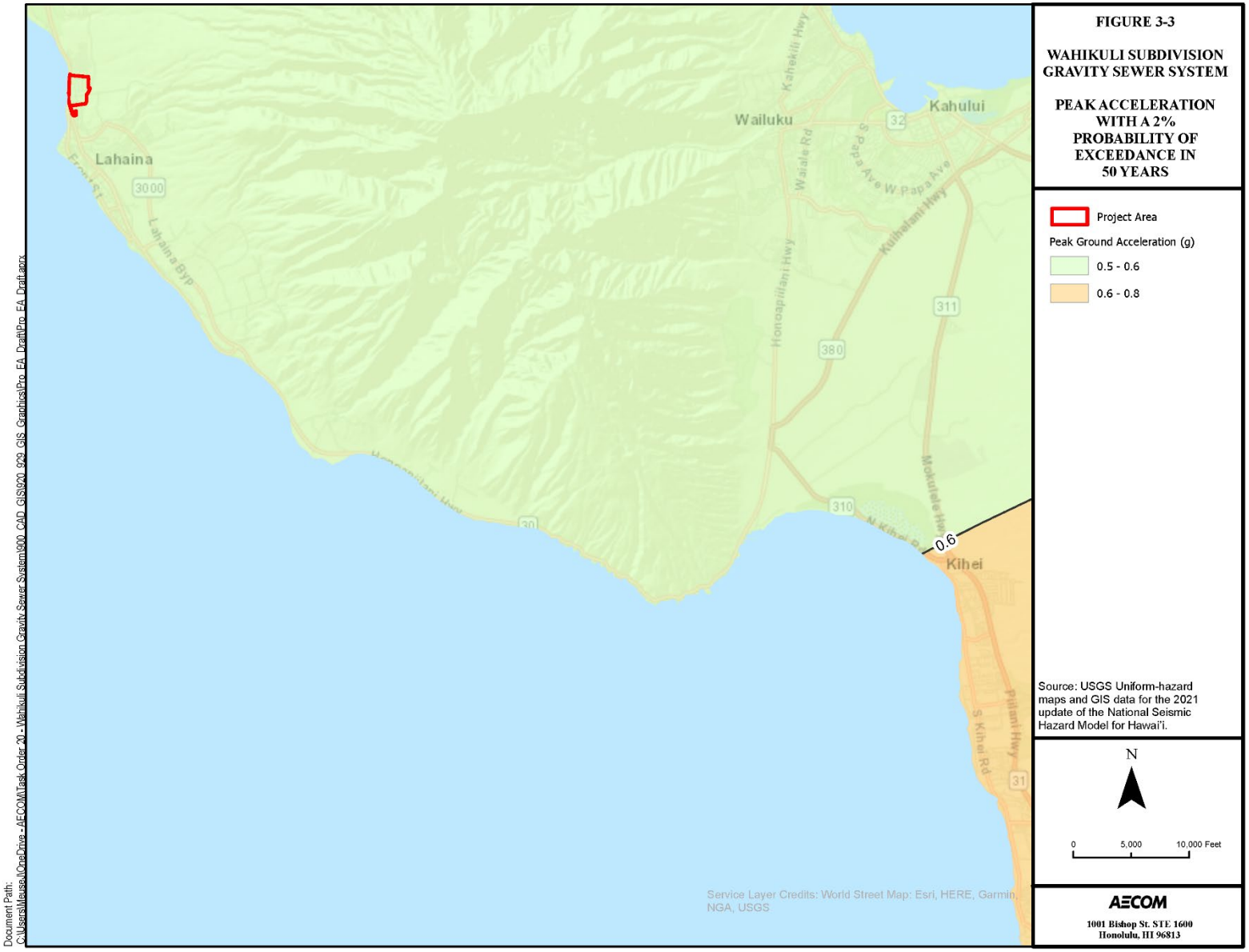

Figure 3-3. Peak Acceleration with a 2% Probability of Exceedance in 50 Years

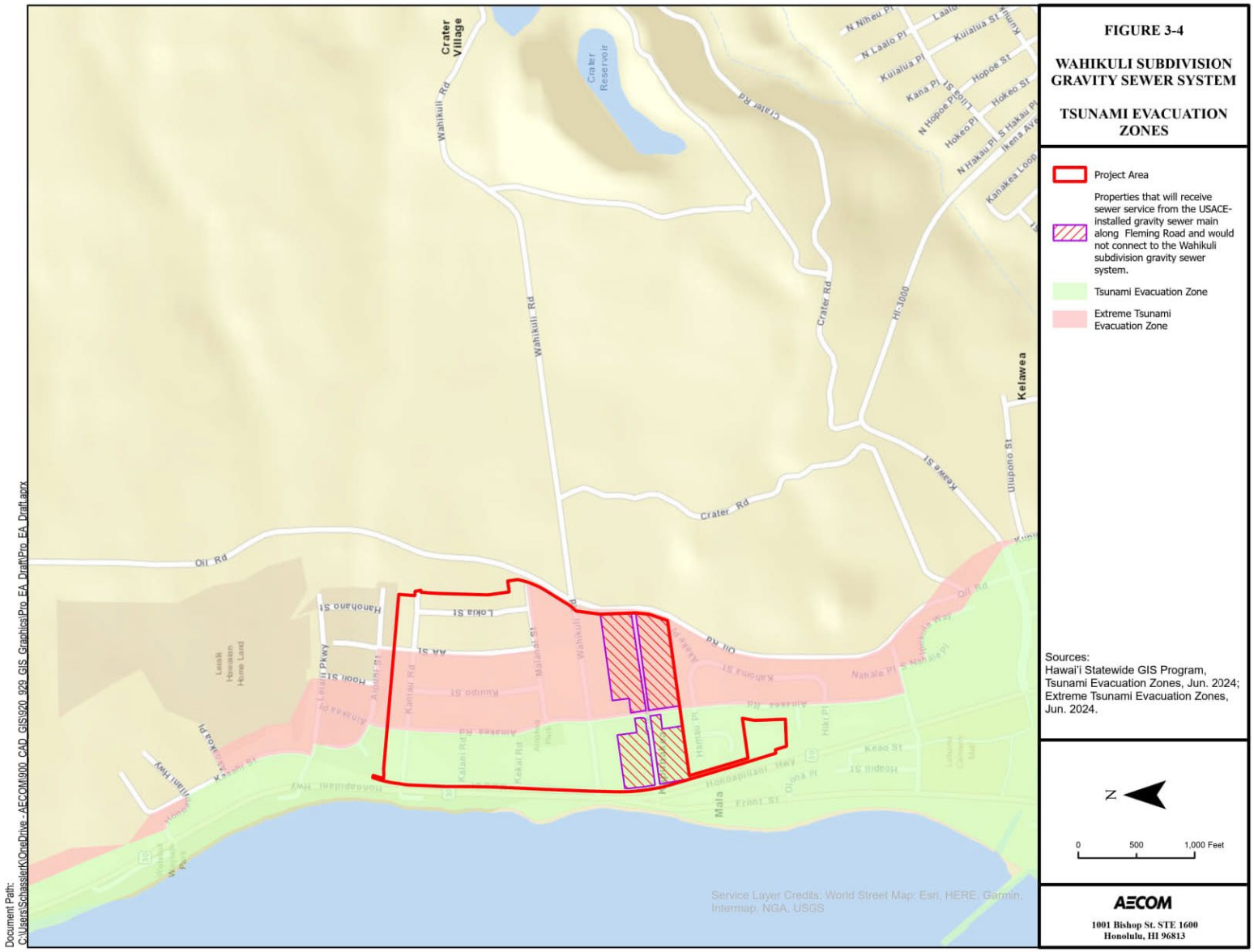

Figure 3-4. Tsunami Evacuation Zones

3.4.2 Impacts and Mitigation Measures

The Proposed Action would not change the risk or vulnerability of Maui County to seismic activity. According to the Maui County Hazard Mitigation Plan Update (County of Maui Emergency Management Agency 2020), all infrastructure within Maui County is considered at risk for earthquakes, including pipes, roads, bridges, dams, water and wastewater treatment facilities, and utility poles. The plan also states that during earthquakes, underground infrastructure such as water and sewer systems are especially vulnerable. Therefore, the proposed gravity sewer system would be seismically constructed to withstand earthquakes in accordance with the Hawai‘i State Building Code as amended by the County.

3.5 Volcanic Hazard

3.5.1 Existing Conditions

The Hawaiian Islands are part of a chain of volcanoes with each island made up of one or more volcanoes (USGS 2025). Haleakalā, the only active volcano on the Island of Maui, is in eastern Maui and last erupted approximately 600 years ago. Lava flows, tephra (airborne lava fragments), volcanic gases, and ground cracks may follow a future eruption (County of Maui Planning Department 2012). Lava flows pose a risk to the Island of Maui from a possible eruption of Haleakalā, as 212.3 square miles, 18.1 percent, of the County of Maui are within lava flow hazard zones (Hawai‘i Emergency Management Agency 2018). These lava flow hazard zones are in eastern Maui, distant from the Project Area.

Volcanic smog, also referred to as vog, is a volcanic hazard that can pose a widespread health hazard. Vog, from Haleakalā or the volcanoes on the Island of Hawai‘i, has the potential to impact the entire County of Maui. Due to the unique topography of Maui Island, vog is funneled through the central valley between the West Maui Mountains and the Haleakalā Volcano. The International Volcanic Health Hazard Network uses past events and information to advise on sulfur dioxide levels that can cause health concerns. For Maui County, the most severe expected vog condition is the orange level, which indicates sulfur dioxide levels are unhealthy for sensitive groups such as the elderly, very young, or those with respiratory illnesses (County of Maui Emergency Management Agency 2020).

3.5.2 Impacts and Mitigation Measures

The Proposed Action would not change the risk or vulnerability of Maui County to volcanic activity or to the hazards associated with volcanic activity. The only active volcano on the Island of Maui, Haleakalā, is in eastern Maui, whereas the Project Area is in West Maui. While the construction or operation of the gravity sewer system would not increase the likelihood of volcanic activity, there always is the potential for volcanic activity to occur. The Proposed Action would be designed and constructed to meet applicable international, federal, State, and County codes and standards to protect against potential structural impacts from volcanic activity.

3.6 Soils

3.6.1 Existing Conditions

The United States Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Survey provides detailed soil maps and descriptions within the Project Area that provide useful information for projects at a larger scale. Based on the web soils survey, primarily two soil types are within the Wahikuli subdivision (USDA Natural Resources Conservation Service 2025). Most of the Wahikuli subdivision has very stony silty clay (WdB), 3 to 7 percent slopes. The subdivision also contains Wahikuli stony silty clay (WcB), 3 to 7 percent slopes. Other soils within the Project Area in smaller areas include Ewa silty clay loam (EaA), 0 to 3 percent slopes and Wahikuli stony silty clay (WcC), 7 to 15 percent slopes (**Figure 3-5**).

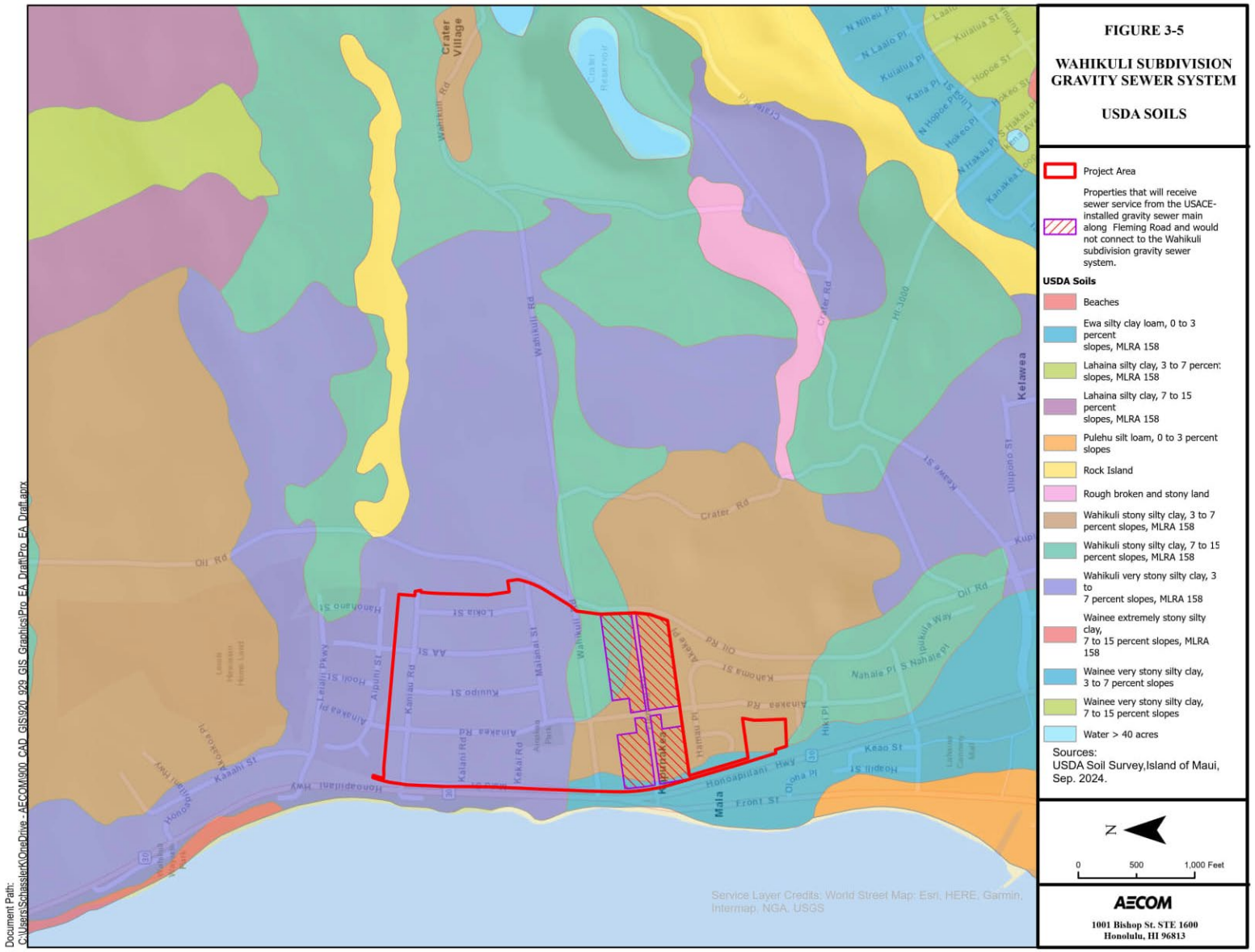

Figure 3-5. USDA Soils

3.6.2 Impacts and Mitigation Measures

During construction of the gravity sewer system soil disturbance would occur. Temporary disturbance would occur during open trench excavation for the installation of sewers and connection to the operational Lahaina No. 3 Pump Station. Once construction is complete, trenches would be backfilled and grade levels above the sewer lines would be restored.

Due to varied soil types, the construction or installation of the gravity sewer may result in altered soil types as backfill would be required to effectively stabilize the sewer systems. Standard best management practices (BMPs), such as silt fences and compost filter socks, would be implemented to preserve slope stability and soil retention. Mitigation measures would be utilized to minimize potential impacts to the soils:

- Construction equipment would be maintained in good working condition to reduce the potential of accidental spills.
- An erosion and sediment control plan would be developed and implemented to minimize any potential impact to soils and to specify control measures (e.g., silt fences, filter bags) to reduce impacts to the natural environment.
- Soil that is not immediately used for backfilling would be stockpiled and covered or otherwise protected (e.g., surrounded by silt fence) to prevent erosion or sedimentation.

Soil stability inspections near the proposed facilities would be conducted periodically to check the condition of these foundations. Improved wastewater treatment for the Project Area would minimize contamination of soils from the existing cesspools, a dated, substandard sewage disposal method.

3.7 Surface Water

3.7.1 Existing Conditions

Maui Island's topography, including mountains sloping from inland down to the shorelines, provides conveyance of freshwater through a mix of streams, gulches, aquifers, and rivers (County of Maui Planning Department 2012). There are no surface waters located within the Project Area. A non-perennial stream, the Wahikuli stream, is located approximately 200 feet north of the Project Area, outside the project boundary (**Figure 3-6**). The nearest perennial stream is Kahoma Stream located approximately 2,200 feet south of the Project Area.

The coastline, consisting of wetlands, dunes, and nearshore waters, is vital as habitat for plants and animals and protection of sand and ocean resources, as well as recreational and aesthetic resources. The Project Area is along the coast but is located mauka, east, of Honoapi'ilani Highway, and a minimum of 100 feet from the shoreline. However, there are Class A waters of the 'Au'au Channel in the Pacific Ocean located along the Wahikuli Wayside Park, located immediately makai, west, of the highway.

3.7.2 Impacts and Mitigation Measures

Construction activities for the Proposed Action would not impact any surface waters. All surface waters are located outside the Project Area, and BMPs such as sediment and erosion controls would be implemented during the construction phase of the project to mitigate any impact due to runoff.

The Proposed Action, when complete, would not negatively impact any surrounding surface waters. The Proposed Action is intended to reduce non-point source pollution by replacing existing cesspools and leaking septic systems with a gravity sewer system. The project aims to improve wastewater management to protect human health, nearshore waters, and coral reefs while minimizing seepage of pollutants from cesspools into Class A waters along Wahikuli Wayside Park.

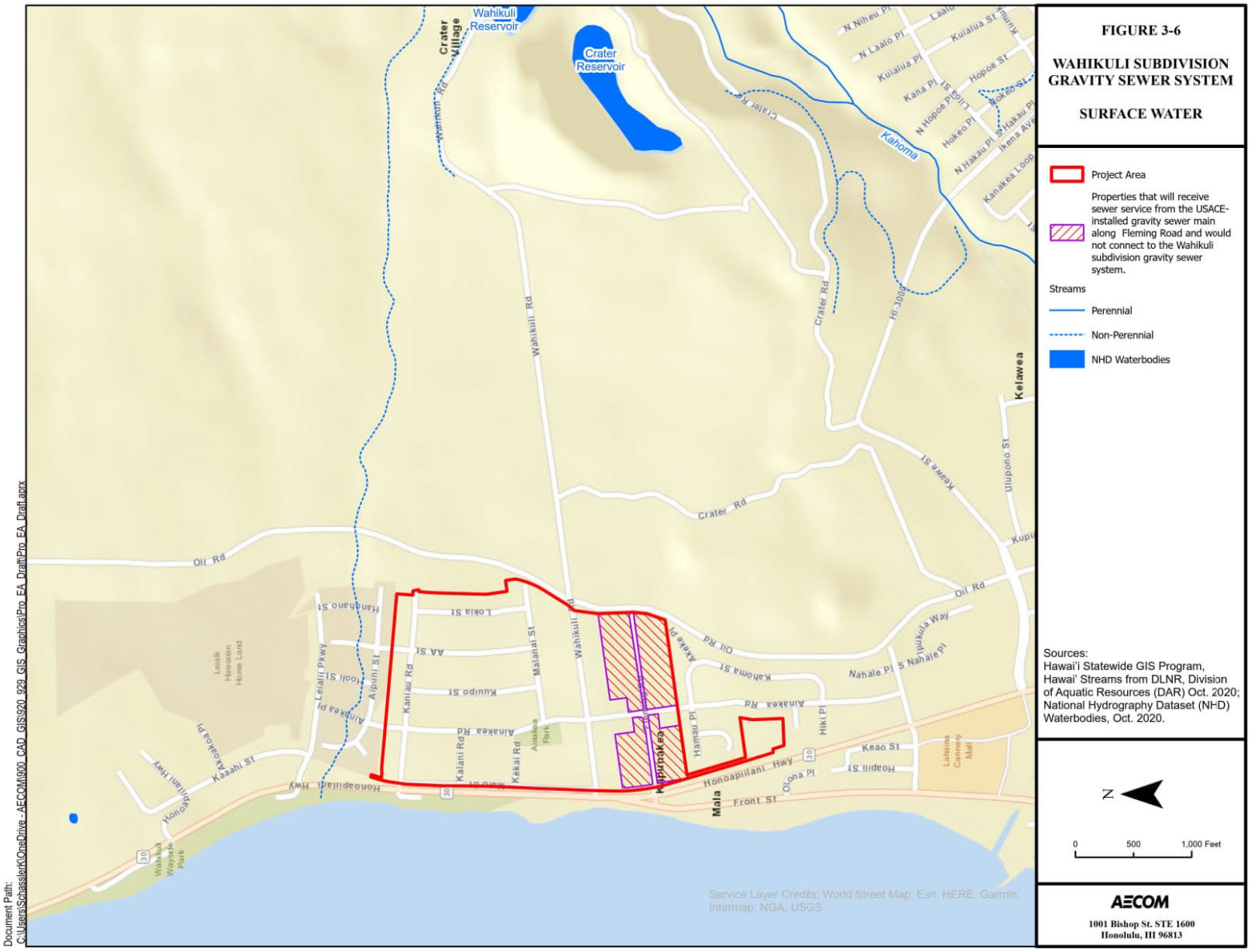

Figure 3-6. Surface Water

3.8 Groundwater

3.8.1 Existing Conditions

Groundwater occurs within portions of geologic formations where aquifers receive and store water. Depending on the geology of the area, many areas on the island rely on groundwater wells to obtain drinking water. The State of Hawai'i Commission on Water Resource Management has divided the Island of Maui into six overarching aquifer sectors, 25 aquifer systems, and 113 unique individual aquifers. The aquifer-system boundaries do not necessarily coincide with hydrogeologic barriers to groundwater flow. West Maui is underlain by the Lahaina Aquifer Sector. All water supply used within the West Maui region, including groundwater and surface water, is generated within the Lahaina Aquifer Sector (County of Maui Department of Water Supply 2019).

The town of Lahaina intersects two distinct aquifer systems within the Lahaina Aquifer Sector; however, the Project Area is entirely within the Honokōwai aquifer system. This system has a sustainable yield of 6 million gallons per day (MGD) and consists of volcanic aquifers, including unconfined basal, unconfined high-level dike, and unconfined high-level perched aquifers. All reported groundwater usage within this system is extracted from the basal zone (County of Maui Department of Water Supply 2019).

Unconfined aquifers have an upper water surface (water table) at atmospheric pressure, allowing them to rise and fall. These aquifers are typically closer to the Earth's surface than confined aquifers, directly responding to surface conditions like rainfall. They are not under pressure from an upper confining layer and are impacted by drought conditions sooner. Compared to high-level aquifers, basal aquifers contain most of Hawai'i's groundwater. Wells dug at lower elevations reach to the tops of these basal aquifers and yield high quality drinking water (University of Hawai'i at Mānoa 2025).

The Project Area is underlain by two aquifers within the Honokōwai aquifer system; a lowland aquifer and a coastal aquifer. The lowland aquifer is found in the lowlands of the Lahaina Aquifer Sector in West Maui, closer to the base of the West Maui Mountains, while the coastal aquifer is located along the coastline and closer to the ocean. According to the USDA Natural Resources Conservation Service Web Soil Survey, a majority of the Project Area has a depth to water table of more than 80 inches (USDA Natural Resources Conservation Service 2025).

Both of these aquifer types have an associated status code that includes descriptions of each aquifer's development stage, public utility use, salinity, uniqueness, and vulnerability to contamination. The lowland aquifer is described as an irreplaceable fresh water (less than 250 milligrams per liter chlorine) aquifer that is currently used as drinking water and is highly vulnerable to contamination. The two layers within the coastal aquifer are described as replaceable aquifers that are not ecologically or significantly important to human activities and have no potential future uses. The upper layer of this aquifer has a high (5,000-15,000 milligrams per liter chlorine) salinity level with a high vulnerability to contamination, while the lower layer has a moderate (1,000-5,000 milligrams per liter chlorine) salinity level with a moderate vulnerability to contamination (Mink and Lau 1990).

The Maui Island Water Use and Development Plan (County of Maui Department of Water Supply 2019) indicates that within the Lahaina Aquifer Sector Area, which includes the Project Area, there are 82 production wells, consisting of 4 domestic, 6 agricultural, 32 irrigation, and 40 municipal wells. In 2014, 96 percent of total groundwater pumpage was from the municipal wells while another 4 percent was from irrigation wells for a total groundwater pumpage of 6.2 MGD. The plan also indicates that while reported pumpage based on well types indicates that there is no domestic well use, it is likely that domestic use is underreported.

3.8.2 Impacts and Mitigation Measures

Groundwater demand for domestic water supply has increased due to West Maui population increases, and groundwater withdrawal will likely continue to increase in the future in response to the increasing population (County of Maui Department of Water Supply 2019). Although much of the groundwater within the coastal aquifer is unusable, the groundwater found in the lowland aquifer, which runs beneath most of

the Project Area, is deemed irreplaceable fresh and potable drinking water that is vital to the West Maui water supply.

While the Proposed Action would require trenching in order to install the gravity sewer system, the Project Area would be restored upon completion of construction. As trenching would range as deep as 14 feet below grade, as noted in **Section 3.2.2**, in some locations trenching may intercept groundwater and short-term trench dewatering might be required. However, no long-term impact to nearby groundwater systems is anticipated.

The Proposed Action is intended to reduce non-point source pollution by replacing existing cesspools and leaking septic systems with a gravity sewer system. The project aims to improve wastewater management to protect human health, nearshore waters, and coral reefs while minimizing seepage of pollutants from cesspools into groundwater and Class A waters along Wahikuli Wayside Park.

3.9 Flood Risk

3.9.1 Existing Conditions

The Project Area intersects a total of two Flood Insurance Rate Map panels with effective dates of September 19, 2012: 1500030361F and 1500030353F (State of Hawai‘i Department of Land and Natural Resources 2024). According to the rate map panels and the Department of Land and Natural Resources Flood Hazard Assessment Tool, most of the Project Area is located in Federal Emergency Management Agency (FEMA) Zone X, an area of minimal flood hazard outside of the Special Flood Hazard Area and at a higher elevation than the 0.2 percent annual chance flood, or Zone D, an area of undetermined flood hazard (**Figure 3-7**). A narrow strip of land along Malo Street on the makai, west, edge of the Project Area boundary is located in an AE Zone. The AE Zone is an area subject to inundation by the 1-percent-annual-chance flood event with a known base flood elevation. The base flood elevation at this location is 12 feet.

3.9.2 Impacts and Mitigation Measures

The Proposed Action would not increase the risk of flooding within the Project Area. Construction activities would cause temporary disturbance to the area during installation of the gravity sewer system. Once construction is complete, the disturbed areas will be returned to preconstruction grades and restored.

3.10 Agricultural Lands

3.10.1 Existing Conditions

Maui County has large areas of high-quality agricultural lands (County of Maui 2010). Maui’s agriculture includes plantation crops, livestock, and aquaculture with leading crops including sugar and pineapple. Under the Agricultural Lands of Importance to the State of Hawai‘i (ALISH) system, lands are classified into the following three classes of agriculturally important lands for the State of Hawai‘i, to facilitate the USDA Soil Conservation Service’s effort to inventory prime farmlands nationally and to adapt the service’s classification to the types of agricultural activity found in Hawai‘i (Hawai‘i Statewide GIS Program 2024a):

Hawai‘i Classification System	Soil Conservation Service Classification System
Prime Agricultural Land	Prime Farmland
Unique Agricultural Land	Unique Farmland
Other Important Agricultural Land	Additional Farmland of Statewide and Local Importance

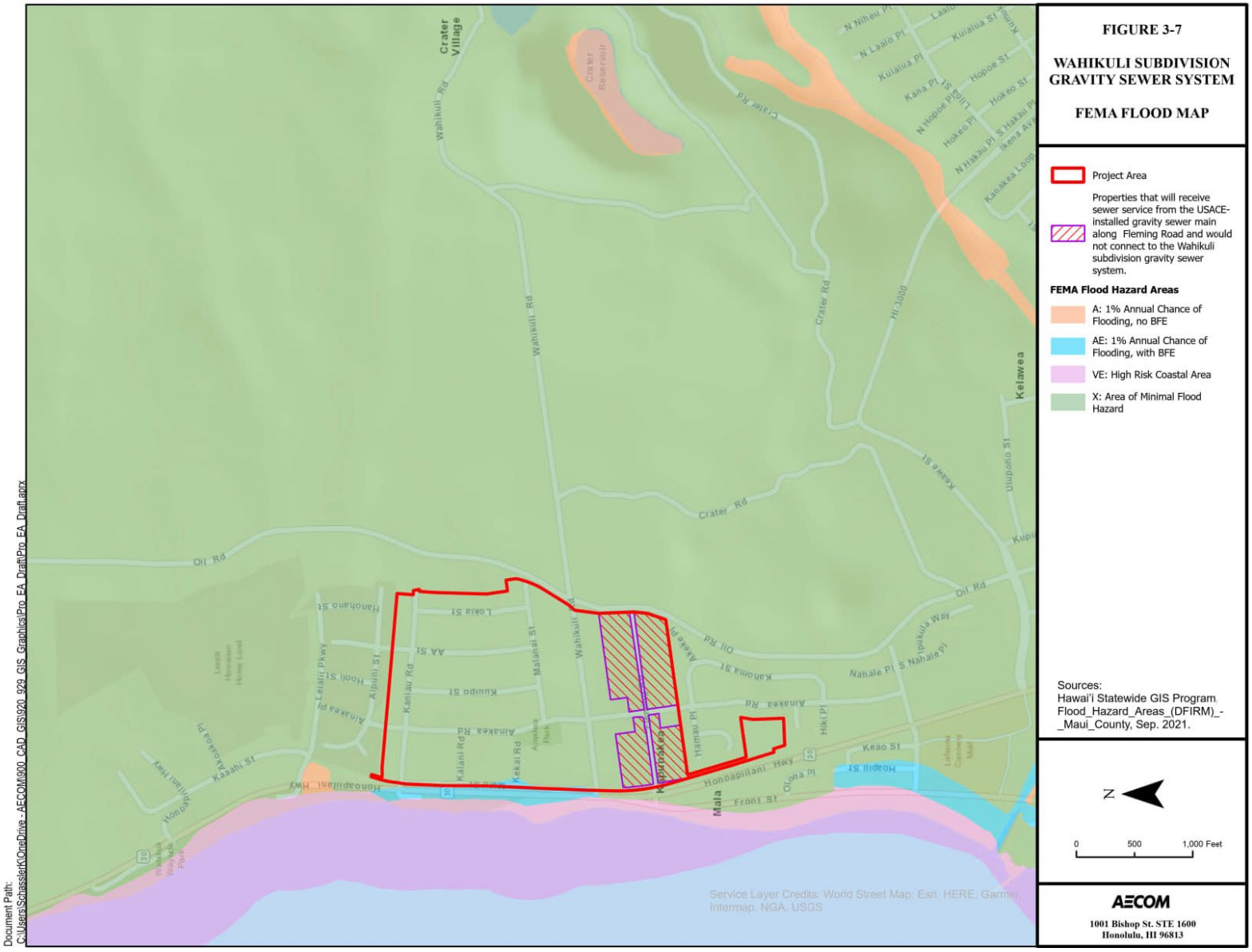

Figure 3-7. FEMA Flood Map

There are 79,392 acres of prime and unique agricultural land and 113,232 acres of other important agricultural lands in Maui County (County of Maui 2010). As shown in **Figure 3-8**, none of the soils within the Project Area are classified as ALISH soils. Areas adjacent to the project boundary in the north and northeast directions are classified as unique, while adjacent land in the southeast direction is classified as prime agricultural lands. Land adjacent to the Project Area to the east, including land classified as prime and unique agricultural lands, is being developed as the Ka La'i Ola temporary housing site and the Kilohana temporary group housing site, as described in **Section 2.1.1**.

3.10.2 Impacts and Mitigation Measures

The Proposed Action is within an existing residential area, and none of the soils are classified under the ALISH system as important agricultural lands. Although the subdivision generally slopes in an east-to-west, makai, direction, as appropriate, sediment and erosion controls would be implemented during construction to mitigate any adverse impacts from stormwater runoff to adjacent ALISH lands.

3.11 Solid and Hazardous Waste

3.11.1 Existing Conditions

Solid waste management on Maui includes landfill disposal, source reduction, recycling, and composting (County of Maui Planning Department 2012). Landfills, including the Central Maui Landfill where most of the island's waste goes, are operated and maintained by the County of Maui Department of Environmental Management's Solid Waste Division. This landfill accepts all municipal waste except for regulated hazardous wastes and commercial construction/demolition debris. Due to limited landfill capacity, the County's Integrated Solid Waste Management Plan outlines a plan to attain 83 percent waste diversion by the year 2040 through automated trash collection and curbside recycling. The plan also explores waste to energy options for Maui.

Household hazardous waste that requires special handling is collected through annual events held by the County. This waste can also be collected from households by appointment, but commercial waste is not accepted. E-waste is collected, consolidated, and shipped through a contract between the County and E-Cycling Maui (County of Maui Department of Environmental Management 2024). Construction and demolition debris are processed at two recycling/processing facilities in the County that repurpose the recovered materials and sell them as dirt and aggregate products.

3.11.2 Impacts and Mitigation Measures

Waste generated or introduced during construction activities, such as oil leaks from vehicles, would be handled and disposed of properly. BMPs would be put in place prior to any construction activities. Spill prevention and response procedures would be implemented to prevent and minimize the discharge of pollutants off the Project Area during construction.

The Proposed Action would not impact current solid and hazardous waste disposal methods. Construction would produce solid waste and construction and demolition debris that would need to be disposed of in the County of Maui. However, methods of disposal would be implemented consistent with County regulations and standards.

The Proposed Action is planned to improve the wastewater disposal methods within the Project Area. The proposed improvements to the sewage treatment and disposal methods aim to improve wastewater management to protect human health, nearshore waters, and coral reefs while minimizing the seepage of pollutants from the cesspools into the Class A waters along Wahikuli Wayside Park. Once the project is complete, the new gravity sewer system would not impact solid or hazardous waste disposal methods or change the amount of solid or hazardous waste within the Project Area.

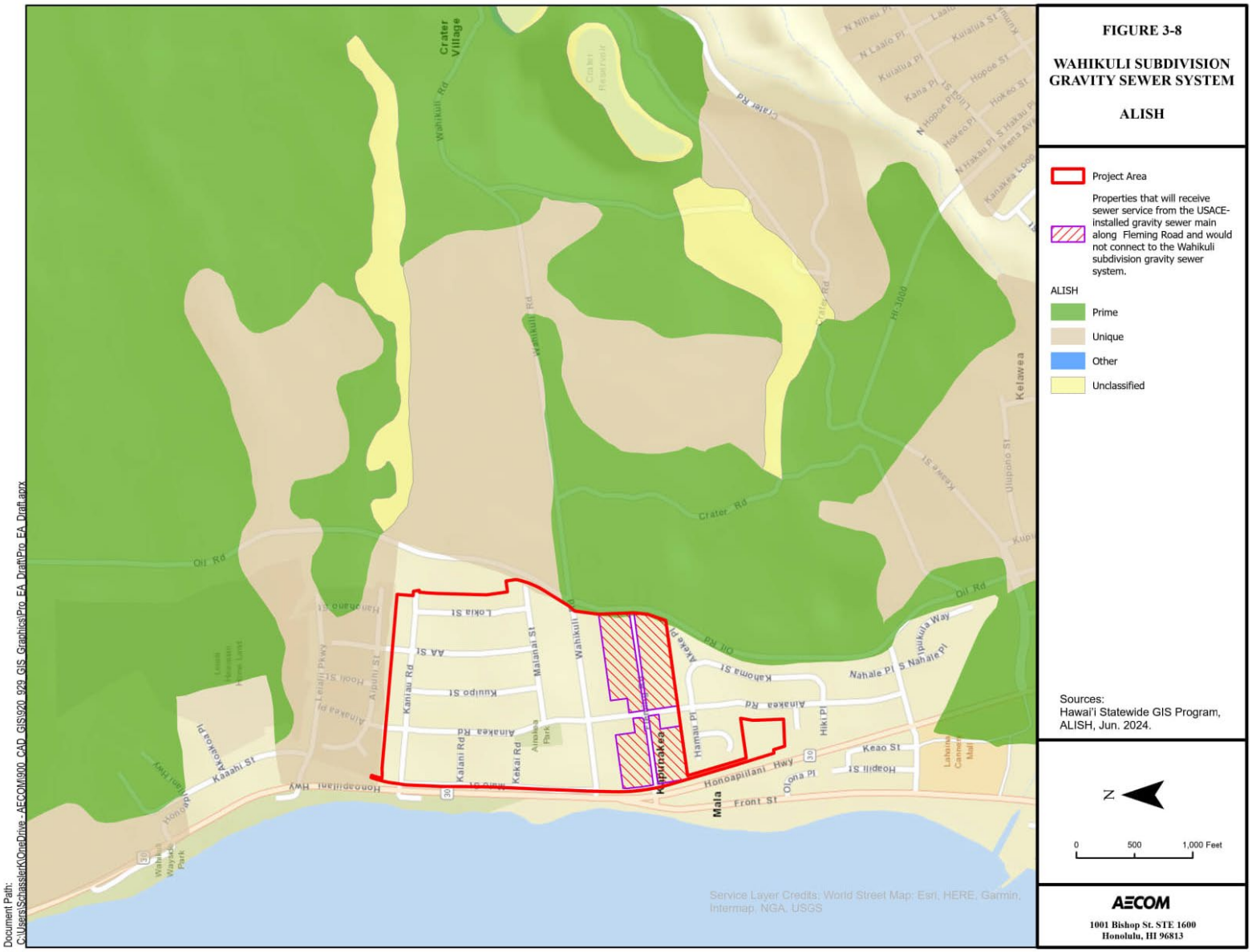

Figure 3-8. ALISH

3.12 Flora

3.12.1 Existing Conditions

A biological survey was conducted in November 2024 within the Project Area for the proposed Wahikuli Subdivision Gravity Sewer System project. The survey focused on identifying populations of special-status species, comprising federally or state listed as threatened, endangered, proposed for listing, or candidate species (SWCA Environmental Consultants 2024) (**Appendix B-1**).

The survey documented vegetation types and plant species present in the Project Area, none of which are unique to either the Project Area or Hawai‘i. Over 90 percent of the plant species identified are non-native to the Hawaiian Islands. The native species observed in the area include naupaka (*Scaevola taccada*), milo (*Thespesia populnea*), pōhinahina (*Vitex rotundifolia*), hau (*Hibiscus tiliaceus*), and ‘uhaloa (*Waltheria indica*).

The vegetation within the Project Area consists of ruderal and landscaped types. Ruderal vegetation, found predominantly along roadways and other disturbed sites, was widespread throughout the area. This type of vegetation was mainly composed of weedy species such as buffelgrass (*Cenchrus ciliaris*), ‘uhaloa, and koa haole (*Leucaena leucocephala*). Landscaped vegetation, mostly located on private lots, was also observed, with occasional street trees along sidewalks. Common species planted in these areas include mango (*Mangifera indica*), plumeria (*Plumeria rubra*), malunggay (*Moringa oleifera*), coconut palms (*Cocos nucifera*), mock orange (*Murraya paniculata*), and crownflower (*Calotropis gigantea*). Among the non-native species, one notable plant was tree tobacco (*Nicotiana glauca*), which is a common host for the federally and state listed endangered Blackburn’s sphinx moth (*Manduca blackburni*).

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool provided an Official Species List comprising nine federally endangered plant species that could potentially occur in the vicinity of the Project Area (**Table 3-1**). No threatened or endangered plant species were observed during the survey. Additionally, there are no designated critical habitats for listed plant species in the Project Area.

Table 3-1. Federally and State Listed Endangered Plant Species Potentially Occurring within Project Area

Common Name	Latin Name	Status
Flowering Plants		
‘Ena‘ena	*Pseudognaphalium sandwicensium var. molokaiense*	Federal and State Endangered
Awiwi	*Schenkia sebaeoides*	Federal and State Endangered
Carter's Panicgrass	*Panicum fauriei var. carteri*	Federal and State Endangered
Dwarf Naupaka	*Scaevola coriacea*	Federal and State Endangered
Ihi	*Portulaca villosa*	Federal and State Endangered
Ko‘oloa‘ula	*Abutilon menziesii*	Federal and State Endangered
Ohai	*Sesbania tomentosa*	Federal and State Endangered
Round-leaved Chaff-flower	*Achyranthes splendens var. rotundata*	Federal and State Endangered
O‘ahu cowpea	*Vigna o-wahuensis*	Federal and State Endangered

3.12.2 Impacts and Mitigation Measures

The mitigation measures described in this section are based on USFWS's general project design guidelines for species included on the Official Species List provided by the IPaC tool. These mitigation measures may be modified based on further consultation with USFWS, Division of Forestry and Wildlife (DOFAW) of the State of Hawai'i Department of Land and Natural Resources, and other resource agencies.

The USFWS and DOFAW are being consulted regarding the potential for the nine endangered species included on the Official Species List and other special-status plant species to be present in the Project Area (**Appendix B-2**). Botanical surveys and other measures to avoid and minimize potential impacts to endangered plants would be implemented as needed based on USFWS and DOFAW's recommendations.

Any plants used for restoration or landscaping would be tested in place before transport to the project site or alternative planting location for little fire ants (*Wasmannia auropunctata*) and coconut rhinoceros beetle (*Oryctes rhinoceros*) to prevent the spread of these highly invasive pests. Plant material removed from the project site would be properly recycled, composted, or disposed of as trash for incineration and not left in piles that could become nesting sites for the coconut rhinoceros beetle. The Maui Invasive Species Committee will be contacted for information about invasive species that may be present in this area and measures that can be taken during construction to minimize their spread.

Additionally, to avoid or minimize potential effects to protected species and avoid the spread of invasive species, the following conservation measures have been incorporated into the Proposed Action:

- All equipment and materials brought to the Project Area will be cleaned and free of soil and plant seeds prior to mobilization to the site.
- Invasive species discovered at the project site will be reported to the Maui Invasive Species Committee by telephone or text at (808) 573-6472.
- Temporary erosion control measures and construction BMPs will be in place during construction such as covering and securing stockpiles, placing drip pans under construction equipment to contain leaks and spills, inspecting materials and equipment daily, and cleaning material offsite prior to mobilization.

Due to the risk of wildfire to listed species, the following measures would be taken when engaging in activities that have a high risk of starting a wildfire (e.g., welding and saw cutting):

- Wetting down the area as needed;
- Ensuring a fire extinguisher is on-hand; and
- Having a spotter to watch for fire starts.

Most of the required trenching for construction of the proposed gravity sewer system would not affect native vegetation, as generally these construction activities would be confined to existing roadways and easements, and the vegetation within the Project Area primarily consists of ruderal and landscaped types. The operation and maintenance of the proposed gravity sewer system is not anticipated to negatively affect flora. If maintenance of the proposed gravity sewer system or the Lahaina No. 3 Pump Station include the use of construction equipment, trimming of trees, and or the clearing of vegetation, appropriate mitigation measures including coordination with DOFAW and USFWS, and plant surveys may be required. Any locations where vegetation is disturbed would be restored to existing conditions. Where appropriate, native plant species would be selected for soil stabilization and replanting efforts. Therefore, construction and operation of a new gravity sewer system is not anticipated to affect threatened or endangered species.

3.13 Fauna

3.13.1 Existing Conditions

No native fauna were observed within the Project Area during the biological survey (SWCA Environmental Consultants 2024) (**Appendix B-1**). The fauna observed within the Project Area consisted of non-native bird species including cattle egret (*Bubulcus ibis*), common myna (Acridotheres tristis), feral chicken (Gallus gallus), house finch (*Haemorhous mexicanus*), Java finch (*Lonchura oryzivora*), northern cardinal (*Cardinalis cardinalis*), red-crested cardinal (*Paroaria coronata*), and zebra dove (*Geopelia striata*); non-native amphibians including brown anole (*Anolis sagrei*); and non-native insects and invertebrates including yellow crazy ant (*Anoplolepis gracilipes*), western honeybee (*Apis mellifera*), yellow oriental paper wasp (*Polistes olivaceus*), and monarch butterfly (*Danaus plexippus*).

Although no native fauna was observed during the survey, the Project Area contains habitat for three special-status species. These habitats include:

- potential foraging and roosting trees for the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*);
- two public parks, ‘Ainakea Park and Wahikuli Terrace Park, that could be potential foraging habitats for the threatened Hawaiian goose (*Branta sandvicensis*); and
- the presence of tree tobacco, a potential host for the endangered Blackburn’s sphinx moth.

Additionally, three endangered Hawaiian seabird species including the band-rumped storm-petrel (*Hydrobates castro*), Hawaiian petrel (Pterodroma sandwichensis), and Newell’s shearwater (*Puffinus newelli*) may transit the area while traveling to and from nesting or fledging sites.

The USFWS IPaC tool provided an Official Species List comprising 11 federally threatened and endangered animal species that could potentially occur in the vicinity of the Project Area (**Table 3-2**). Although the Project Area does not overlap with any federally designated critical habitats for listed terrestrial fauna, it is in the vicinity of a proposed terrestrial critical habitat for threatened green sea turtles (*Chelonia mydas*).

Table 3-2. Federally and State Listed Threatened and Endangered Animal Species Potentially Occurring within Project Area

Common Name	Latin Name	Status
Mammals		
Hawaiian Hoary Bat	*Lasiurus cinereus semotus*	Federal and State Endangered
Birds		
Band-rumped Storm-petrel	*Hydrobates castro*	Federal and State Endangered
Hawaiian (koloa) Duck	*Anas wyvilliana*	Federal and State Endangered
Hawaiian Coot	*Fulica alai*	Federal and State Endangered
Hawaiian (nēnē) goose	*Branta sandvicensis*	Federal and State Threatened
Hawaiian Petrel	*Pterodroma sandwichensis*	Federal and State Endangered
Hawaiian Stilt	*Himantopus mexicanus knudseni*	Federal and State Endangered
Newell’s Shearwater	*Puffinus newelli*	Federal and State Threatened

Common Name	Latin Name	Status
Reptiles		
Green Sea Turtle	*Chelonia mydas*	Federal and State Threatened
Hawksbill Sea Turtle	*Eretmochelys imbricata*	Federal and State Endangered
Insects		
Blackburn's Sphinx Moth	*Manduca blackburni*	Federal and State Endangered

Hawaiian Hoary Bat

The endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) is the only native terrestrial mammal of Hawai‘i. The habitat requirements of the Hawaiian hoary bat are not well-understood and have been identified as one of the primary data needs for species recovery (USFWS 1998, Gorresen et al. 2013). The species has been observed foraging in both open and forested habitats and will leave young pups unattended in trees and shrubs when they forage (USFWS 1998). The mobility of the species by flight results in all areas from the coast to the highest mountains being accessible to foraging by the Hawaiian hoary bat (Gorresen et al. 2013). Hawaiian hoary bats forage for insects as low as 3 feet above the ground in a variety of habitats; making entanglement in barbed wire fencing a threat for this species (USFWS 1998). The bats are solitary roosting in both native and non-native trees greater than 15 feet in height (Bonaccorso et al. 2015). During the Hawaiian hoary bat birthing and pup rearing season, from June 1 through September 15, bat pups that cannot yet fly may be present in roost trees. There is a risk that young bats could inadvertently be harmed or killed, since they are too young to fly or may not move away from disturbance.

Hawaiian short-eared owl

The state endangered Hawaiian short-eared owl or pueo (*Asio flammeus sandwichensis*) has the potential to occur but is not anticipated to nest in the Project Area. Pueo are a crepuscular species, most active at dusk and twilight. Pueo nest on the ground and active nests have been found year-round. They are commonly found in open habitats such as grasslands, shrublands, and montane parklands, including urban areas and those actively managed for conservation.

Hawaiian Seabirds

Threatened and endangered Hawaiian seabirds include the endangered Hawaiian petrel (*Pterodroma sandwichensis*), the endangered band-rumped storm-petrel (*Oceanodroma castro*), and the threatened Newell’s shearwater (*Puffinus newelli*). These birds feed in the ocean and nest at high elevation on the steep slopes of extinct volcanoes. They may fly over the Project Area at night during their breeding, nesting, and fledging seasons from March 1 to December 15. Outdoor lighting can result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the Project Area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable to light attraction.

Hawaiian Waterbirds

Endangered Hawaiian waterbirds, Hawaiian stilt (*Himantopus knudseni*), Hawaiian coot (*Fulica alai*), and Hawaiian duck (*Anas wyvilliana*), can be found in a variety of wetland habitats including freshwater marshes, ponds, coastal estuaries, artificial reservoirs, kalo or taro (Colocasia esculenta) lo‘i or patches, irrigation ditches, sewage treatment ponds, and in the case of the Hawaiian duck, montane streams and

marshlands. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation. Hawaiian ducks are also subject to threats from hybridization with introduced mallards.

Construction projects that result in the creation of standing or open water may attract Hawaiian waterbirds to the project site (attractive nuisance). Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success.

There are no marshes or ponds in the vicinity of the Project Area that would provide suitable habitat for Hawaiian waterbirds. There are no streams in the Project Area. Wahikuli Stream is a non-perennial culverted, mostly underground, stream located approximately 200 feet north of the Project Area. The nearest perennial stream is Kahoma Stream located approximately 2,200 feet south of the Project Area.

Hawaiian Goose (Nēnē)

Hawaiian geese, Nēnē, are found on the islands of Hawai‘i, Maui, Moloka‘i, and Kaua‘i. They are observed in a variety of habitats, but prefer open areas, such as pastures, golf courses, wetlands, natural grasslands and shrublands, and lava flows. Threats to the species include introduced mammalian and avian predators, wind facilities, and vehicle strikes. The Hawaiian goose has an extended breeding season, with eggs reported from all months except May, June, and July, although most nest during the rainy (winter) season between October and March.

Although Hawaiian geese were not observed during the biological survey, suitable foraging habitat was identified at the two public parks within the Project Area, ‘Ainakea Park and Wahikuli Terrace Park.

Blackburn's Sphinx Moth

Adult Blackburn’s sphinx moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), ‘ilie‘e (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*). The larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native ‘aiea (*Nothocestrum* sp.). To pupate, the larvae burrow into the soil and can remain in a state of torpor for a year or more before emerging from the soil. Soil disturbance can result in death of the pupae.

A single tree tobacco plant was observed during the biological survey; however, there was no evidence that larvae or adult Blackburn’s sphinx moths are present within the Project Area.

Hawaiian Sea Turtles and Hawaiian Monk Seals

The threatened green sea turtle may choose any sandy beach in the Pacific Islands for nesting. The endangered hawksbill sea turtle (*Eretmochelys imbricata*) can nest on various surfaces, including sandy beaches and crushed coral, with nests commonly placed under vegetation. Green sea turtles nest in Hawai‘i between May and September, with peak nesting occurring in June and July, while hatchlings typically emerge in November and December. Hawksbill sea turtles exhibit strong nesting site fidelity, often returning to the same beaches where they were born decades earlier, nesting from April to November each year (USFWS 2025a).

Endangered Hawaiian monk seals (Monachus schauinslandi) primarily come ashore to give birth, rest, and molt. They prefer sandy, protected beaches surrounded by shallow waters for pupping. Female seals haul out on shore for up to seven weeks to give birth and nurse their pups. While Hawaiian monk seals give birth year-round, pups are typically born between late March and early April. A newborn seal generally nurses with its mother for about one month (The Marine Mammal Center 2025).

Proposed Critical Habitat

The USFWS is proposing to designate terrestrial critical habitat for five distinct population segments of the green sea turtle. A critical habitat is a specific geographic area that is designated by the government as being essential for the conservation of a threatened or endangered species. It is legally protected under laws like the Endangered Species Act (16 U.S.C. § 1531) in the United States.

The critical habitat designation aims to protect essential areas for both the Central North Pacific Distinct Population Segment of the threatened green sea turtle, as well as four other distinct population segments, and the endangered Hawaiian monk seal by reducing risks posed by harmful human activities, such as development, pollution, and overfishing. This designation supports conservation efforts to improve the health and conditions necessary for the recovery of both species, contributing to their long-term survival and overall conservation.

The proposed critical habitat for the threatened green sea turtle and designated critical habitat for the endangered Hawaiian Monk Seal includes several essential areas for their survival:

- Nesting and Resting Sites: For both species, these areas include sandy beaches and rocky shorelines where green sea turtles come ashore to nest and Hawaiian monk seals haul out to rest, give birth, and nurse. Key locations include the Hawaiian Archipelago and the Northwestern Hawaiian Islands, such as Kure Atoll and Midway Atoll.
- Foraging Grounds/Areas: These are marine environments where both species feed. Green sea turtles rely on shallow coastal waters and coral reefs for seagrasses and algae, while Hawaiian monk seals hunt for fish, crustaceans, and cephalopods in similar marine areas.
- Migratory Pathways and Corridors: These include the migratory routes used by both species to move between their nesting, resting, and foraging sites, ensuring they can access necessary habitats for survival.

3.13.2 Impacts and Mitigation Measures

Hawaiian Hoary Bat

To avoid inadvertent harm or mortality to young bats that cannot yet fly, trees and other woody plants greater than 15 feet in height would not be removed or trimmed during the Hawaiian hoary bat birthing and pup rearing season from June 1st to September 15th. If this cannot be avoided, DOFAW and USFWS would be consulted. As discussed above, bats can become entangled in barbed wire fencing. The Proposed Action does not include the installation of any barbed wire fencing or other types of fencing. If temporary construction fencing is required, the use of barbed wire would be avoided. With the implementation of these mitigation measures, potential impacts to Hawaiian hoary bats would be avoided.

Hawaiian short-eared owl

The endemic pueo or Hawaiian short-eared owl could potentially nest in the Project Area. However, the likelihood of a pueo nest being present within the residential area is extremely low. If a pueo nest is discovered, DOFAW would be notified, and a 100-foot buffer zone would be established around the nest in which no work or clearing of vegetation would occur until nesting ceases.

Hawaiian Seabirds

The Proposed Action does not include the installation of any new permanent lighting. However, lighting from night construction can disorient seabirds, resulting in collision with manmade structures or grounding of seabirds. No night construction is anticipated. In the highly unlikely event that nighttime construction work is required, all construction lighting would be downward facing and fully shielded to avoid or minimize impacts. In addition, nighttime construction work that requires outdoor lighting would be avoided during the seabird fledging season from September 15th through December 15th, and all outdoor lighting, apart from streetlights, would have automatic motion sensor switches and controls or would be turned off when construction activities are occurring in the lighted area. If downed seabirds are detected both DOFAW and USFWS would be contacted.

The use of temporary construction fencing is not anticipated. In the unlikely event that temporary construction fencing is required, three strands of polytape (or similar measure) would be integrated into the fence to increase visibility. With the implementation of these mitigation measures, potential impacts to Hawaiian seabirds from construction activities would be avoided.

Hawaiian Waterbirds

There are no streams, wetlands, or other standing water habitat in the Project Area. Hawaiian waterbirds would not generally be found in the active roadways, shoulders, and sidewalks that comprise the Project Area. As discussed above, there are no marshes or ponds in the vicinity of the Project Area that would provide suitable habitat for Hawaiian waterbirds. There are no streams within the Project Area. Wahikuli Stream is a non-perennial culverted, mostly underground, stream located approximately 200 feet north of the Project Area. The nearest perennial stream is Kahoma Stream located approximately 2,200 feet south of the Project Area. Therefore, Hawaiian waterbirds are not anticipated to be in the Project Area.

The proposed gravity sewer system would be installed in the County of Maui roadway rights-of-way and as needed, easements across private property. If the Proposed Action creates any kind of temporary or permanent standing water, Hawaiian waterbirds could use these areas for loafing, foraging, and possibly nesting. Applicable measures from the USFWS's Best Management Practices for Work in or Around Aquatic Environments would be incorporated into the project design. With the implementation of these mitigation measures, potential impacts to Hawaiian waterbirds from construction activities would be avoided.

The removal of cesspools under all alternatives is anticipated to improve water quality in streams, wetlands, ponds, and nearshore waters throughout the Lahaina District, thereby having a beneficial effect on Hawaiian waterbird habitat.

Hawaiian Goose (Nēnē)

Should construction activities take place between September and April, a wildlife biologist would be consulted and would survey the site for nesting Hawaiian goose prior to the start of construction activities. Should a Hawaiian goose be observed in the Project Area, all work within 100 feet would cease and the bird would not be approached. Work may continue after the bird or birds leave the area of their own accord. Additionally, to minimize impacts to the Hawaiian goose, a 15 miles per hour (MPH) speed limit would be established within construction work areas during active construction. With the implementation of these mitigation measures, potential impacts to Hawaiian geese from construction activities would be avoided.

Blackburn's Sphinx Moth

The Project Area would be confined to County of Maui roadway rights-of-way, including paved or landscaped roadway shoulders and sidewalks, and as needed, easements across private property. As mentioned above, the biological survey conducted for the Proposed Action observed the presence of tree tobacco, a non-native plant and potential host for the endangered Blackburn's sphinx moth. Although the Blackburn's sphinx moth was not observed in the survey area, non-native host plants suitable for its larval stages are likely to establish in unmaintained sections of the Project Area. Based on recommendations from USFWS, DOFAW, and the biological survey conducted for the Proposed Action, a survey for the moth and its host plants would be conducted by a biologist familiar with the species prior to construction and vegetation clearing, consistent with the most recent USFWS guidance.

These surveys would ideally be conducted during the wettest part of the year and within 4 to 6 weeks prior to construction. If moths, eggs, larvae, native ʻaiea or tree tobacco over 3 feet tall are found during the survey, USFWS and DOFAW would be contacted. To avoid attracting Blackburn's sphinx moth at sites where construction activities are planned or ongoing, it is recommended that tree tobacco plants less than 3 feet tall be removed. If tree tobacco plants over three feet in height are present at a construction site, the plants would be inspected by a qualified biologist for the presence of Blackburn's sphinx moth eggs and larvae. With the implementation of these mitigation measures, potential impacts to Blackburn's sphinx moth from construction activities would be avoided.

Hawaiian Sea Turtles and Hawaiian Monk Seals

The Project Area is located inland within a neighborhood along the coast but is separated from the coastline by Honoapiʻilani Highway (Highway 30) and is distant from sandy beach habitats that could be

used for sea turtle and Hawaiian monk seal nesting. The makai side of the Honoapiʻilani Highway consists of a rocky shoreline, making it less suitable for sea turtle nesting. Therefore, threatened green sea turtles, endangered Hawksbill Sea turtles, and State endangered Hawaiian monk seals are not anticipated to be present in the Project Area. Additionally, no night work is proposed for the Proposed Action.

Potential impacts to the critical habitats of threatened green sea turtles and endangered Hawaiian monk seals include coastal development, pollution, fishing practices, human disturbance, climate change, invasive species, and marine vessel traffic, all of which can degrade nesting, foraging, and resting areas.

The Proposed Action does not include construction activities on beaches and along rocky shorelines where sea turtles or Hawaiian monk seals could be present. Endangered Species Act consultation would be completed with the National Marine Fisheries Service (NMFS) prior to construction. To avoid and minimize potential impacts on sea turtles and monk seals and their critical habitats, the following conservation measures would be incorporated into the Proposed Action:

- All construction equipment and vehicles would be parked on and operated from the roadway or paved roadway shoulder. To avoid impacts to sections of beach and sand compaction outside the footprint of the proposed stabilization structures, vehicles, and equipment would not be driven or parked on beaches.
- Night work is not anticipated for the Proposed Action. In the unlikely event that night construction is required, it would be avoided during the green sea turtle hatching season, May to September. In addition, any night construction lighting would be directed towards the ground and shielded so the bulb can only be seen from below, to avoid attracting sea turtles.
- No materials would be stockpiled in the intertidal zone or reef flat.
- The Proposed Action would implement applicable NMFS BMPs for work in the marine environment.
- Any monk seal sighting would be reported to the NOAA Statewide Hawaiʻi Marine Wildlife Hotline at (888) 256-9840 at the time of observation. Documentation of the sighting (e.g., photos, video, reports, etc.) would be emailed to: pifsc.monksealsighting@noaa.gov.

With the implementation of these mitigation measures, potential impacts to sea turtles and Hawaiian monk seals from construction activities would be avoided.

Predators

To avoid and minimize impacts to vulnerable birds from non-native predators such as cats, rodents, and mongooses, measures would be taken to avoid attraction and proliferation of non-native predators. Measures to minimize predator presence would include not feeding feral cats and ensuring all food waste is properly disposed of in covered trash receptacles.

3.14 Air Quality

Regional and local climate, together with the amount and type of human activity, generally dictate the air quality of a given location. Sources relevant to the Proposed Action include mobile sources, such as vehicles and construction equipment, as well as stationary sources, such as emergency generators, and natural processes (e.g., wildfires and volcanic activity) that results in the release of air pollutant emissions.

To protect public health and welfare, the EPA, under the requirements of the 1970 Clean Air Act (CAA) as amended in 1977 and 1990, has established National Ambient Air Quality Standards (NAAQS) for six air pollutants known as criteria pollutants (40 Code of Federal Regulations (CFR) 50): carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} [particulate matter with a diameter ≤ 10 micrometers], and $PM_{2.5}$ [particulate matter with a diameter ≤ 2.5 micrometers]), lead (Pb), and sulfur dioxide (SO_2). Under Hawaiʻi Administrative Rules (HAR) Title 11, Chapter 59, the State of Hawaiʻi has

adopted more stringent air quality standards for CO and NO_2 than the federal ambient air quality standards (AAQS) and amended additional AAQS for PM_{10} and SO_2.

Areas where concentration levels are below the NAAQS for a criteria pollutant are designated as being in "attainment" per the CAA. Areas where a criteria pollutant level equals or exceeds the NAAQS are designated as being in "nonattainment." A maintenance area is one that has been re-designated from nonattainment status and has an approved maintenance plan under Section 175 of the CAA. Where insufficient data exist to determine an area's attainment status, it is designated as either unclassifiable or in attainment.

In addition to establishing the NAAQS, the CAA also sets permit rules and emission standards for stationary pollution sources of certain sizes. The State of Hawai'i Department of Health (DOH) has adopted the USEPA-established stationary source regulations and acts as the administrator to enforce stationary source air pollution control regulations in Hawai'i (DOH, Title 11, Chapter 60.1, Air Pollution Control). The DOH grants an air permit to applicable facilities for not only federal enforceable major sources but also non-major sources in the State.

With respect to volcanic emissions, SO_2, one of the most common gases released in volcanic eruptions, released from active volcanoes would be of concern with respect to human activities as well as on the global scale due to its potential to influence climate.

In addition to the criteria pollutants, hydrogen sulfide (H_2S) is a toxic, colorless gas with a characteristic "rotten egg" odor detectable at very low levels, although it is not a criteria pollutant. It occurs naturally during the decomposition of organic matter, near geothermal sources and is also produced during certain industrial processes, including wastewater treatment.

3.14.1 Existing Conditions

To protect the State's air quality from degradation, the DOH's Clean Air Branch is responsible for regulating and monitoring pollution sources to ensure that the levels of criteria pollutants remain well below the State and federal ambient air quality standards. The State of Hawai'i operates air monitoring stations on Hawai'i, two of which (Kīhei and Kahului) are located on the Island of Maui to monitor $PM_{2.5}$ concentrations. Monitoring data is gathered to inform the public about air quality conditions and to demonstrate compliance with national and State AAQS. According to the most recent monitoring result in Hawai'i including those on the Island of Maui, the State is in attainment for all criteria pollutants (DOH 2024).

Since there are no wastewater collection and treatment facilities in the Project Area, the odor in terms of H_2S levels associated with wastewater treatment is anticipated to be low.

3.14.2 Impacts and Mitigation Measures

Construction associated with the proposed gravity sewer system within the Project Area would result in short-term, intermittent air quality impacts within and beyond the Project Area due to the operation of construction equipment and vehicles, and privately-owned vehicles. Site clearing, grubbing, excavation, and grading would result in localized increases in fugitive dust during overall sewer system construction. However, all construction activities would comply with the provisions of HAR 11-60.1-33, *Fugitive Dust*. Dust management BMPs such as regular watering would be implemented for construction activities. Therefore, temporary construction activities under the Proposed Action are anticipated to have minor impacts to air quality.

Potential pumping equipment to be installed where connecting to the sewer system via gravity is difficult and improvement to existing pumping stations to be utilized to convey wastewater to the Lahaina Wastewater Reclamation Facility may involve operation of minor stationary combustion sources, e.g., a standby generator, that could be regulated under DOH air permitting regulations (DOH Title 11, Chapter 60.1). During the design phase, if applicable, the implication of air permitting requirements under the Proposed Action at pump stations will be evaluated to ensure potential operational air quality impacts

would indeed be minor as anticipated. Therefore, anticipated air quality impacts from operational activities are not expected to interfere with the attainment of NAAQS and no mitigation measures are warranted.

3.15 Historic, Archaeological, and Cultural Resources

This County of Maui project is being proposed, in coordination with the EPA, with funding from FEMA through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, or "Stafford Act" (codified as amended at 42 United States Code (U.S.C.) § 5121 et seq.). EPA and FEMA have determined that the project is a federal undertaking and is subject to the National Historic Preservation Act (NHPA) Section 106 review process (36 CFR §800). FEMA has opted to use the Programmatic Agreement currently in effect with FEMA of the United States Department of Homeland Security, the Hawai'i State Historic Preservation Officer, the Office of Hawaiian Affairs, and Hawai'i Emergency Management Agency, executed in 2016, as extended through amendment in 2023.

In the Section 106 review process, a historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term also includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian Organization (NHO) and that meet the National Register criteria (36 CFR 800.16).

3.15.1 Existing Conditions

The area of potential effect (APE) for the undertaking is approximately 94.6 acres and is coterminous with the Project Area **(Figure 2-2**). It includes the Wahikuli Subdivision where gravity sewer lines and laterals would be installed, the section of Malo Street that would be used to connect the sewer system to the Lahaina No. 3 Pump Station, the Lahaina No. 3 Pump Station property, and Wahikuli Terrace Park that might be used as staging areas. Most of the APE has been previously disturbed by historic agricultural practices, the development of the Wahikuli Subdivision, and the development of the existing roadway infrastructure. The only undeveloped portion of the APE consists of two parks including Wahikuli Terrace Park near the Lahaina No. 3 Pump Station and ʻAinakea Park within the Wahikuli Subdivision. Any existing subsurface historic properties within the APE would likely have been impacted by the development of the subdivision and historic agricultural practices.

3.15.1.1 Historic Context

The APE is within the district (moku) of Lahaina in the ahupuaʻa of Wahikuli. The district of Lahaina along with the other 11 districts of Maui were portioned out during the rule of Kakaʻalaneo, under the direction of a kahuna (chief) named Kalaihaʻōhiʻa (Beckwith 1970:383). Kakaʻalaneo lived in the modern-day district of Lahaina on the hill Kekaʻa (Beckwith 1970:384). Lahaina continued to be a favored place of residence and primary seat of government for the high chiefs of Maui including Chief Kahekili prior to his death in 1794 (Handy and Handy 1972).

Kamehameha the Great landed in Lahaina during his push to unify the Hawaiian Islands in the late 1700s. By this time Lahaina had become well-known as a port for trading and a landing point for exploring vessels. By the 1800s, the port town had become an important shipping point for the sandalwood trade and later the whaling industry. By 1840, Lahaina became the center of government for the Kingdom of Hawai'i and could be regarded as the birthplace of the Constitutional Monarchy, as the "Luaʻehu Constitution," the first constitution of the Kingdom, was promulgated at Luaʻehu in Lahaina (Kamakau 1961:197).

The APE is within the ahupuaʻa of Wahikuli which is directly north of the former Hawaiian government capital in the district of Lahaina. While the government and commerce were mainly focused near the whaling port in Lahaina during the early post-contact period, the ahupuaʻa of Wahikuli was mainly used for agriculture purposes during this time. Most of the ahupuaʻa of Wahikuli was retained as government lands with two small land commission awards (LCAs) were granted in the southern portion of the ahupuaʻa to J. Kaeo (LCA 5483:2) and F. Keliipio (LCA 477).

The Pioneer Mill Co. Ltd. (PiMCo) began leasing government land within the ahupua‘a of Wahikuli in 1890. Most of the land at this time was covered in large boulders making it only usable by hand cultivation. Some inland portions of the ahupua‘a, east of the current APE, were considered to have “good soil” and were subject to steam plow cultivation. By 1913, the majority of the ahupua‘a was under sugar cane cultivation. PiMCo constructed a sophisticated network of agricultural fields, transportation networks, and water control systems serving the plantation which covered a vast area extending throughout the district of Lahaina.

Following the early economic success of PiMCo, public interest in beach and house lots in Wahikuli for homesteading reached a high demand. The homesteads lots were planned for development along the less desirable rocky soil portions of the former agricultural fields. In the 1920s, government property in Wahikuli was auctioned off and about two-thirds of the lots sold for more than the demand price. The development of these lots occurred in five stages (1st through 5th Series) and included plans for a more robust roadway system serving the new community, herein referred to as the Wahikuli subdivision.

By the 1960s, access to the seaward portion of the ahupua‘a had greatly increased with the construction of the Honoapi‘ilani Highway (Federal Aid Project S-0300-1), while the inland portions remained in sugar cane cultivation under the control of the PiMCo. A small portion of the government lands (96,412 square feet) occurring at the corner of ‘Ainakea Road and Kekai Road were retained for the ‘Ainakea Park Reserve. Construction of the Wahikuli Subdivision was completed by the early 1970s. See FEMA’s Section 106 consultation letter for a full history of the subdivision’s development (**Appendix C-1**).

3.15.1.2 Archaeological Resources

SWCA Environmental Consultants (SWCA) produced an archaeological literature review and field inspection (LRFI) report (Gross and Hopkins 2024) (**Appendix C-2**) in support of the Proposed Action. SWCA conducted the field inspection of the APE on November 8, 2024. Gross and Hopkins (2024) noted four historic properties in the vicinity of the APE. These include SIHP #s 50-50-03-08886 (plantation railroad corridor) and 50-50-03-08887 (plantation railroad corridor) occurring right outside of the APE boundaries to the east and west; 50-50-03-00011 (Haluluko‘ako‘a Heiau; destroyed); and 50-50-03-09023 (human remains). See **Figure 3-9** for a map showing the location of these historic properties.

An archaeological inventory survey has not been conducted within the APE; however, archaeological monitoring occurred in support of a project that previously occurred along the Wahikuli Road and Fleming Road rights-of-way. During archaeological monitoring, Kulaiwi Archaeology, LLC made an inadvertent discovery of human remains along a portion of the Fleming Road right-of-way. The human remains were assigned SIHP # 50-50-03-09023 and described as originating from a deposit of brown sand fill overlaying a water main approximately 1 meter below the surface of the roadway. The State Historic Preservation Division (SHPD) determined that the inadvertent discovery will be relocated from the location of discovery.

Archaeological investigations that have occurred outside of the APE have identified remnants of the former traditional Hawaiian agriculture practices, burial sites, and habitation sites in areas within portions of the ahupua‘a that were not heavily disturbed by PiMCo’s agricultural infrastructure. Most of PiMCo’s operations within Wahikuli consisted of sugar cane agricultural fields, water control features, and transportation networks.

The previous archaeological investigations that have occurred nearest to the current APE are associated with the State of Hawai‘i Housing Finance and Development Corporation’s (HHFDC’s) Lahaina Master Plan. The project planning began in the 1970s and included several archaeological investigations conducted mostly within the inland (mauka) portion of the ahupua‘a. The project later became known as the Villages of Leiali‘i and included several phases of development which are currently ongoing. The archaeological investigations associated with this project include Jensen (1989); Jensen and O’Claray (1991); Goodwin and Leineweber (1997); Corbin and Rosendahl (2008); Lee and Dega (2021); and Madeus et al. (2022). See **Table 3-3** for a full summary of previous archaeological investigations that have occurred in association with nearby development projects.

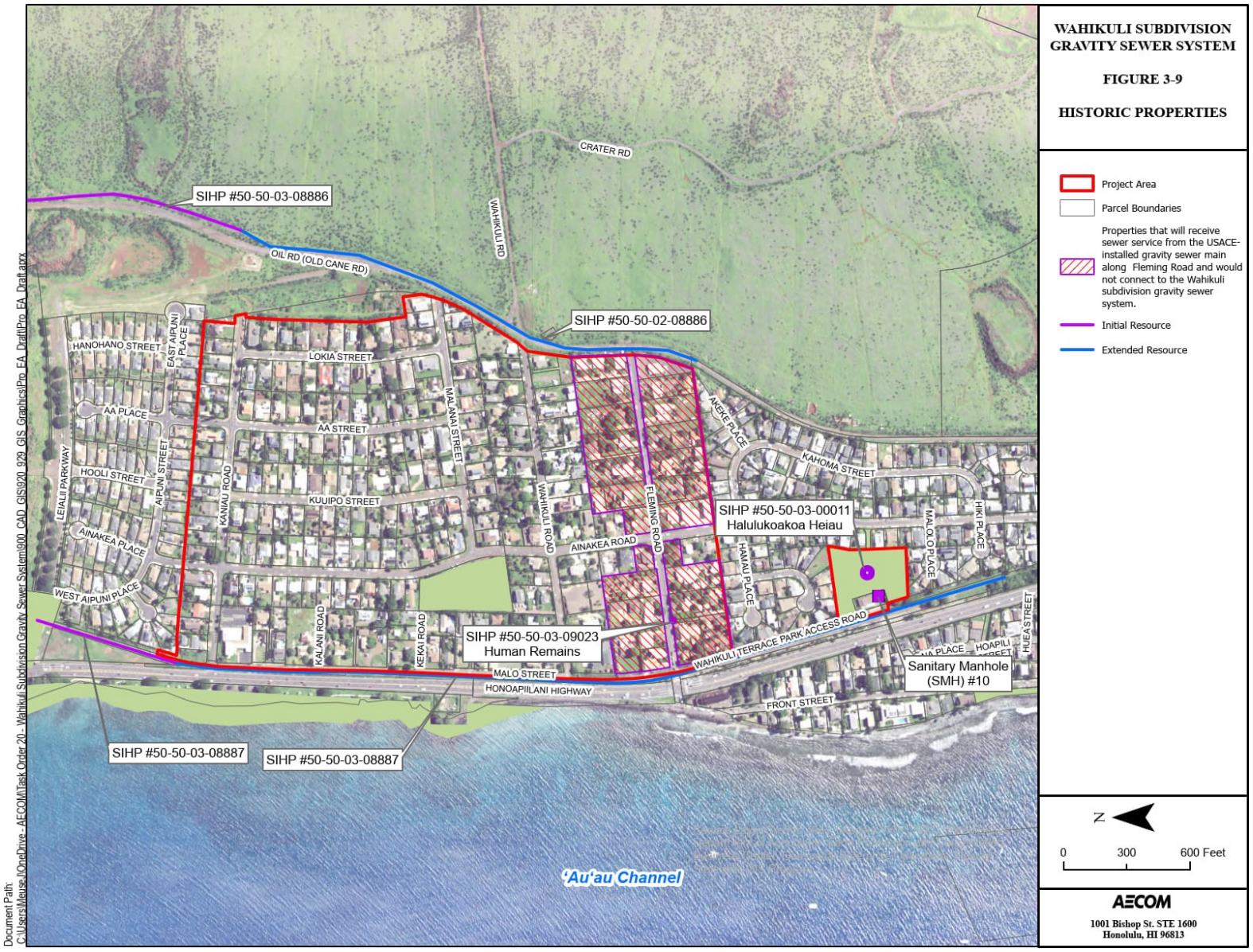

Figure 3-9. Locations of Historic Properties Noted by Gross and Hopkins (December 2024)

Table 3-3. Previous Archaeological Investigations

Reference Report	Survey Type	Associated Project	Findings
Walker (1931)	Archaeological Survey	Survey of Archaeological Resources on the Island of Maui	Identified the Haluluko‘ako‘a Heiau (SIHP # 50-50-03-00011). No surface remnants of the heiau remain today. Based on the information available the heiau was likely located within or near the modern day Wahikuli Terrace Park property.
Jensen (1989)	AIS	HHFDC’s Lahaina Master Plan	Identification of native Hawaiian historic properties including walled enclosures (SIHP #s 50-50-03-02480, 50-50-03-02483, 50-50-03-02484, 50-50-03-02485, and 50-50-03-02488), burial sites (50-50-03-02486), agricultural terraces (SIHP #s 50-50-03-02478, 50-50-03-02479, 50-50-03-02481, 50-50-03-02482, and 50-50-03-02483), the Kahoma Complex (SIHP # 50-50-03-01203), and a historic agricultural access road alignment (SIHP # 50-50-03-02487).
Jensen and O’Claray 1991	Supplemental AIS	HHFDC’s Lahaina Master Plan	Identified four archaeological historic properties during the survey including SIHP #s 50-50-03-02847 (enclosure), 50-50-03-02489 (terraces, footpath, habitation site, and possible burial site), 50-50-03-02490 (terraces, enclosure, and agricultural site), and 50-50-03-02484 (partial enclosure). Noted several archaeological historic properties just outside of the Lahaina Bypass Section project area including SIHP #s 50-50-03-04104 (habitation site), 50-50-03-02491 (terraces), 50-50-03-02893 (Pu‘ukoli‘i Cemetery), 50-50-03-02485 (enclosure), 50-50-03-02486 (burial sites), and 50-50-03-02487 (historic road).
Lee and Dega (2021)	AIS	HHFDC’s Lahaina Master Plan	No subsurface historic properties were identified within the test units; however, Lee and Dega note the presence of two clearing mounds associated with PiMCo’s historic landscape (SIHP # 50-50-03-04420) which spans most of the apartment complex project area.
Goodwin and Leineweber (1997)	AIS	HHFDC’s Lahaina Master Plan	The report includes a comprehensive identification and evaluation of PiMCo’s historic landscape (SIHP # 50-50-03-04120). Identified six structures and various features associated with the PiMCo’s infrastructure including an airstrip, a railroad, and the Wahikuli Ditch along with other ancillary water control features.
Corbin and Rosendahl (2008)	Archaeological Survey and Cultural Impact Assessment	HHFDC’s Lahaina Master Plan	No additional historic properties were identified during the survey which was mainly focused on the southern portion of the master plan project area.

Reference Report	Survey Type	Associated Project	Findings
Madeus et al. (2022).	AIS	HHFDC's Lahaina Master Plan	Identified three significant historic properties during the survey including SIHP #s 50-50-03-08886 (plantation railroad corridor), 50-50-03-08887 (Lahaina, Kā'anapali and Pacific railroad), and 50-50-03-08888 (historic road).
Barrera (1989)	Archaeological Reconnaissance Survey	Honoapi'ilani Highway Realignment Project	Identified SIHP #s 50-50-03-03001 (Lahaina, Historic District), 50-50-03-01978 (Pioneer Mill), 50-50-03-01978 (Kā'anapali Power Plant), 50-50-03-01596 (Hale Pa'i Printing Museum), the Kahoma Complex (SIHP # 50-50-03-01203), a newly discovered agricultural complex along Alternative C, and a newly discovered habitation terrace along Alternative A.
Jensen (1991)	AIS	Honoapi'ilani Highway Realignment Project	Identified four archaeological historic properties including SIHP #s 50-50-03-02847 (enclosure), 50-50-03-02489 (terraces, footpath, habitation site, and possible burial site), 50-50-03-02490 (terraces, enclosure, and agricultural site), and 50-50-03-02484 (partial enclosure). Noted several archaeological historic properties just outside of the Lahaina Bypass Section project area including SIHP #s 50-50-03-04104 (habitation site), 50-50-03-02491 (terraces), 50-50-03-02893 (Pu'ukoli'i Cemetery), 50-50-03-02485 (enclosure), 50-50-03-02486 (burial sites), and 50-50-03-02487 (historic road).
Lee-Grieg et al. (2008)	AIS	Honoapi'ilani Highway Realignment project	Identified two historic-era agricultural push piles (SIHP #s 50-50-03-06492 and #50-50-03-06596).
Lee-Grieg et al. (2009)	Inadvertent Discovery	Honoapi'ilani Highway Realignment project	Additional fieldwork for 400 agricultural terraces (SIHP # 50-50-03-06277) inadvertently discovered.
Hommon (1974)	Archaeological Reconnaissance Survey	U.S Army Corps of Engineers Kahoma Stream Flood Control project	Identified several archaeological historic properties including the Kahoma Stream Terrace System (SIHP # 50-50-03-01775).
Connolly (1974)	Phase I Archaeological Survey	U.S Army Corps of Engineers Kahoma Stream Flood Control project	Identified several archaeological historic properties including the Kahoma Stream Terrace System Complex consisting of 36 terraces with stone-reinforced retaining walls, seven cement structures, four free standing stone walls, and two ditches (SIHP # 50-50-03-01775); a burial mound (SIHP # 50-50-03-00226) near the mouth of the Kahoma Stream; and noted a the presence of the Haia Terrace System (SIHP # 50-50-03-01776) just outside of the flood control project area. Also identified surface artifacts associated with the sites.

Reference Report	Survey Type	Associated Project	Findings
Joerger and Kaschko (1979)	Cultural History Overview	U.S Army Corps of Engineers Kahoma Stream Flood Control project	The report indicates the Kahoma Stream historically terminated in the modern-day location of the Mala Wharf in an area traditionally known as Kapaʻulu, meaning enclosure of bread fruit. Water from the stream was fed into a local fishpond traditionally known as the ʻAlamihi Fishpond. Noted the presence of the historic Puʻupiha Cemetery to the west of the fishpond located at the mouth of the stream.
Ahlo and Morgenstein (1980)	Archaeological Test Excavations	U.S Army Corps of Engineers Kahoma Stream Flood Control project	The excavations produced artifacts and sediments associated with the ʻAlamihi Fishpond. Noted there is a high probability of burial sites occurring near the mouth of the stream.
Gross and Hopkins (2024)	Archaeological Literature Review and Field Inspection	Current Project	Identified extensions of the SIHP #s 50-50-03-08886 (plantation railroad corridor and 50-50-03-08887 (Lahaina, Kāʻanapali and Pacific railroad) that occur right outside of the current APE boundaries to the east and west. SWCA Environmental Consultants also approximated the location of the Haluluko‘ako‘a Heiau (SIHP No. 50-50-03-00011) based on the information provided in Walker (1931).

3.15.1.3 Traditional Cultural Activities and Related Resources

SWCA produced a cultural impact assessment (CIA) report (Traub and Hopkins 2025) in support of the Proposed Action (**Appendix C-3**). The CIA includes a review of literature with the historical accounts of the APE and the results of community consultation with NHOs, community groups, government agencies, and individuals identified as having a potential interest in the project. SWCA's consultation list included all NHOs listed on the U.S. Department of the Interior's Native Hawaiian Organization Notification List whose geographical purview is West Maui and whose stated mission relates to environment and/or culture. The list also included select NHOs with a statewide purview whose stated mission relates to the environment and/or culture. An attempt was made to contact a total of 114 organizations and individuals, however only one response was received. SWCA also published a public notification in the Ka Wai Ola news publication. No responses were received.

The one respondent, Ikaika Nakahashi, a cultural historian with the SHPD, replied to the consultation request letter via email. Nakahashi recommended that SWCA use media to solicit additional information for the CIA and consult with Keʻeaumoku Kapu and the County of Maui Department of ʻŌiwi Resources. Nakahashi also suggested meeting with native tenants and people who currently live or previously lived in the ahupuaʻa of Wahikuli to gather information about cultural resources and practices. SWCA notes that they attempted to contact both Keʻeaumoku Kapu and the County of Maui Department of ʻŌiwi Resources, but they did not respond to the consultation request.

Although no additional information about the traditional cultural activities and related resources were documented by SWCA, historical literature provides some information regarding the ceremonial use of the APE. The presence of puʻu (crater) geological features inland of the APE suggests the region held religious and/or ceremonial importance to native Hawaiians. Some puʻu in this region are also regarded as leaping off places for the souls (leina a kaʻuhane). Additionally, Haluluko‘ako‘a Heiau (SIHP # 50-50-03-00011) likely once stood within or near the modern day Wahikuli Terrace Park property at the southern end of the APE.

Walker (1931), Thrum (1909), and Fornander (1918) provide some of the earliest descriptions of the Haluluko‘ako‘a Heiau. These descriptions are translated from native Hawaiian mo‘olelo (oral histories). The heiau was known to be luakini heiau (sacrificial temple) according to Walker (1931:109-114). The stories are associated with heiau include themes of people finding refuge from sacrifice at the temple through a guiding and protecting pueo (owl) god. Although the protagonists in these stories vary, the most well-known account is within the Legend of Maui as originally told by told by Lemuel K.N. Papa Jr. In the story, the demi-god was also saved from his sacrificial fate at Haluluko‘ako‘a Heiau by the guiding owl god (Fornander 1918:538-540).

Haluluko‘ako‘a Heiau is one of three heiau in the district of Lahaina that predated the reign of Chief Kahekili. Two of these, Haluluko‘ako‘a and Wailehua, “are distinguished as receiving Liholiho’s [Kamehameha II’s] first public duty, at his consecration of them in 1802, after he had been sanctified to that service as the heir of Kamehameha I, at the early age of five years” (Thrum 1909:44). Kamakau further explains the Kamehameha I rededicated the heiau during his stay in Lahaina prior to his invasion of Kaua‘i in 1802 (Kamakau 1961:189).

Aside from ceremonial practices, government records indicate two LCAs were claimed just south of the APE by Josua Kaeo (LCA 5483:2) and P. Keliipio (LCA 477-F). Both awards can be seen on historic maps from 1865 (Registered Map 1051) and 1913 (Registered Map 2569) and appear to be the earliest known house lots in Wahikuli.

3.15.2 Impacts and Mitigation Measures

As documented in FEMA’s Section 106 consultation letter for the Proposed Action, the agency followed the Standard Project Review process in accordance with Stipulation II.C. of the Programmatic Agreement. FEMA determined that the Wahikuli Subdivision Gravity Sewer System project would have no adverse effect on historic properties. Even though no National Register of Historic Places (NHPA) eligible historic properties were identified within the APE, FEMA committed to incorporating avoidance and minimization measures to avoid potential effects to historic properties. The State Historic Preservation Officer (SHPO) concurred with FEMA’s determination of no adverse effect and FEMA’s stipulation that FEMA will implement avoidance and mitigation measures to avoid, minimize, or mitigate potential effects to historic properties. In addition to the mitigation measures provided by FEMA, the SHPD requested archaeological monitoring conventions be implemented during the project. See **Appendix C-1**.

3.15.2.1 Archaeological and Historic Resources

To incorporate avoidance and minimization measures for inadvertent effects to historic properties resulting from this undertaking, as documented in the Section 106 consultation letter, FEMA will require the following:

- Archaeological monitor(s) who meets the Secretary of the Interior Professional Qualifications Standards for that discipline, and is based in Hawai‘i, will be on site during all new ground disturbing activities.
- Cultural observer(s) will be on site during all new ground disturbing activities.
- Contractors, along with Archaeological monitor(s) and Cultural Observer(s) will meet before the project starts to identify and delineate, with flags or flagging tape, historic areas of concern and avoidance.
- In the event of an inadvertent discovery of human remains, the process outlined in Stipulation III.B. of the Programmatic Agreement and HAR §13-300-40 would be followed. Additionally, the federal agency will follow the 11 of the 13 principles developed by the Advisory Council on Historic Preservation (ACHP) in the policy statement on burial sites, human remains, and funerary objects as they pertain to the current undertaking. See **Appendix C-4**.
- The locations of the inadvertent discovery of human remains (SIHP 50-50-03-09023) and (SIHP # 50-50-03-00011 [Haluluko‘ako‘a Heiau]) previously identified in the APE will be marked with flagging or temporary fencing as areas of avoidance prior to commencement of construction.

- The locations of the railroad alignment (SIHP # 50-50-30-08886 and 50-50-03-08887) just outside the APE will be annotated on the project related construction plans.
- It is highly recommended that a location for temporary curation of any iwi revealed during the project be decided before the start of construction.

3.15.2.2 Cultural Resources

To avoid potential effects to cultural resources, a program of cultural monitoring would be required as mentioned above. The cultural monitor(s) would meet before the project starts to identify and delineate, with flags or flagging tape, historic areas of concern and avoidance, and validate the application of the ACHP policy statement.

The native Hawaiian moʻolelo associated with the Haluluko‘ako‘a Heiau suggest the endemic pueo or Hawaiian short-eared owl could have spiritual importance with the ahupua‘a of Wahikuli. As noted above, the owls potentially nest in the APE. However, the likelihood of a pueo nest being present within the residential area is extremely low. If a pueo nest is discovered the mitigation measures outlined in **Section. 3.13.2** would be followed.

3.16 Socioeconomic Characteristics

3.16.1 Existing Conditions

The Project Area is located within the Lahaina Census Designated Place (CDP)[3], which encompasses a land area of approximately 7.8 square miles and a water area of about 1.5 square miles (United States Census Bureau (USCB) 2024). The land area of the CDP represents approximately 0.7 percent of the land area of the Maui County.

3.16.1.1 Population and Housing

USCB conducts a census of the United States every 10 years, in years ending in zero, to count the population and housing units for the entire United States. The most recently completed decennial census is the 2020 Census. **Table 3-4** presents population statistics for the Lahaina CDP. Population data are from the USCB 2010 and 2020 Censuses.

Table 3-4. Population, 2010 and 2020, and Population Density, 2020

Geographic Area	Land Area (square miles)	Population			2020 Density (persons per square mile)[1]
		2010	2020	Percent Change 2010-2020[1]	
Lahaina CDP	7.8	11,704	12,702	8.5	1,633
Maui County	1,161	154,834	164,754	6.4	142
State of Hawai‘i	6,423	1,360,301	1,455,271	7.0	227

[1] Values were calculated based on USCB gazetteer and census data.

Sources: USCB 2024; USCB 2025a, 2010 and 2020 Decennial Census Redistricting Data (PL 94-171), Table P1, Race.

[3] CDPs are statistical counterparts of incorporated places, delineated to provide data for settled concentrations of population identifiable by name but not legally incorporated under the laws of the state in which they are located. (United States Census Bureau (USCB) 2025b)

Based on the decennial census data for 2010 and 2020, the Project Area appears to be a relatively densely populated community undergoing robust population growth, with a population density and rate of growth substantially higher than those of the County or State. However, during the five most recent years for which USCB population data is available for Lahaina, from 2019 to 2023 the estimated populations of both Maui County and the Lahaina CDP have declined, as shown in **Table 3-5**. Since 2019, the estimated population of the CDP had decreased by approximately 13.6 percent.

Table 3-5. Population Change, 2019-2023

Geographic Area	Population				
	2019	2020	2021	2022	2023
Lahaina CDP	12,776	13,216	13,261	12,906	11,423
Maui County	165,979	166,657	164,568	164,765	164,632
State of Hawai‘i	1,422,094	1,420,074	1,453,498	1,450,589	1,445,635

Sources: USCB 2025a, 2019 through 2023 American Community Survey 5-Year Estimates, Table DP05, ACS Demographic and Housing Estimates.

Based on the USCB American Community Survey five-year estimates for 2023, the number of housing units in the Lahaina CDP totaled about 3,960, as shown in **Table 3-6**. The total number of units in Maui County was about 72,300. Using USCB population, household, and housing unit counts from the 2020 decennial census and econometric models, the State of Hawai‘i Department of Business, Economic Development, and Tourism (DBEDT) (2024a, Table 3) forecasts that Maui County will need approximately 4,070 to 6,210 additional housing units over the 2025-2035 period.

Table 3-6. Housing Units, 2023

Geographic Area	Total Housing Units	Occupied Housing Units[1]	Vacant Housing Units[2]	Percent Vacant
Lahaina CDP	3,959	3,379	580	14.6
Maui County	72,303	55,485	16,818	23.3
State of Hawai‘i	564,905	488,991	75,914	13.4

[1] A housing unit is classified as occupied if it is the usual place of residence of the person or group of people living in it at the time of enumeration.

[2] A housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by people who have a usual residence elsewhere are also classified as vacant.

Source: USCB 2025a, 2023 American Community Survey 5-Year Estimates, Table DP04, Selected Housing Characteristic; USCB 2025b.

Approximately 14.6 percent of the housing units in the Lahaina CDP were vacant. The vacancy rate for Hawai‘i County was higher and that for the State of Hawai‘i was lower. The high vacancy rates throughout these geographies are due in large part to the high proportion of housing units that are intended by the owner to be occupied for seasonal, recreational, or occasional use; i.e., vacation homes (DBEDT 2024a). Approximately 50.5 percent of the housing units in the Lahaina CDP are vacant for seasonal[4],

[4] Seasonal units are intended by the owner to be occupied during only certain seasons of the year. They are not anyone’s usual residence. (USCB 2025b)

recreational, or occasional use and, as such, are unavailable to the resident housing market (USCB 2025a, 2023 American Community Survey 5-Year Estimates, Table B25004, Vacancy Status).

3.16.1.2 Employment and Income

Based on data from the United States Bureau of Labor Statistics (USBLS) (2025a), annual average unemployment rates in Maui County jumped by 15.3 percent between 2019 and 2020 and slid 10.1 percent in 2021, as shown in **Table 3-7**. The County unemployment rate then recovered further, decreasing to 3.2 and 4.4 percent in 2022 and 2023, respectively. The unemployment rates for the State of Hawai‘i followed a similar trend over the five-year period, although the rates for the State were substantially lower than the rates for Maui County in 2020, 2021, and 2023.

Table 3-7. Annual Average Labor Force, 2019-2023

Geographic Area	2019	2020	2021	2022	2023
Maui County					
Labor Force	89,477	85,343	87,392	87,098	86,842
Employment	87,293	70,212	80,779	84,270	83,025
Unemployment	2,184	15,131	6,613	2,828	3,817
Unemployment Rate (%)	2.4	17.7	7.6	3.2	4.4
State of Hawai‘i					
Unemployment Rate (%)	2.5	11.7	6.0	3.3	3.0

Source: USBLS 2025a.

In 2020, Maui County had the highest annual average county unemployment rate in the State (USBLS 2025b, Labor Force Data by County, 2020 Annual Averages). For the State of Hawai‘i, the monthly unemployment rate had reached a historical low in December 2017 at 1.9 percent but then soared to a historical high in April 2020 at 22.5 percent (USBLS 2025b, Current Unemployment Rates for States and Historical Highs/Lows, Seasonally Adjusted).

Table 3-8 presents income and poverty estimates for the Project Area from the 2023 American Community Survey 5-Year Estimates. Median household income in the Lahaina CDP was approximately 9.6 percent lower than the median household in Maui County overall. Although the relative values differ, the overall pattern for median family income and married couple family income are the same as that described for median household income: Median family and married couple family incomes in the Lahaina CDP were lower than the median family incomes in the County overall. Per capita income also was lower in the Project Area than in Maui County; about 15.0 percent lower.

Table 3-8. Income and Poverty, 2023

Geographic Area	Median Income in 2023 Dollars			Per Capital Income in 2023 Dollars	Persons in Poverty (%)
	Household	Family	Married Couple Family		
Lahaina CDP	85,988	91,552	107,022	37,730	12.9
Maui County	95,076	109,882	123,940	44,403	9.8
State of Hawai‘i	98,317	115,643	129,923	44,823	10.0

Sources: USCB 20025a, 2023 American Community Survey 5-Year Estimates, Table S1901, Income in the Past 12 Months (in 2023 Inflation-Adjusted Dollars); Table S1902, Mean Income in the Past 12 Months (in 2023 Inflation-Adjusted Dollars); and Table S1701, Poverty Status in the Past 12 Months.

Reflecting the lower incomes in the Lahaina CDP, the proportion of persons in poverty in the Project Area was higher than in the County, which in turn was comparable to the poverty rate in the State overall (**Table 3-8**). Across all measures of income—i.e., median household, median family, and per capita—incomes were lower in in Lahaina CDP and, accordingly, poverty rates were higher.

3.16.2 Impacts and Mitigation Measures

3.16.2.1 Proposed Action

The Proposed Action construction expenditures would result in one-time increases in economic output, employment, and earnings, and one-time increases in fiscal revenues of the State. The economic impacts of Proposed Action construction would include the impact of expenditures on construction materials, and on earnings of construction workers and professional service providers during the construction period, as well as the impacts of those changes on the overall economy of Lahaina, Western Maui, and Maui County.

The construction industry in the Maui County is projected to grow, both on the short-term and on the long-term (**Table 3-9**), with the mining, construction, and utilities sector projected to expand by an estimated 520 jobs between 2022 and 2040, at an annualized rate of approximately 0.5 percent. Nonetheless, the current and projected future County construction labor force might not be sufficient to fill the Proposed Action demand for construction workers, as well as ongoing and future regional demand.

Table 3-9. Maui County Civilian Mining, Construction, and Utilities Wage and Salary Jobs, 2022-2040

Job Sector	2022[1]	2030	2040
Mining, Construction, and Utilities	5,130	5,470	5,650

1. Actual figures from the United States Bureau of Economic Analysis with missing values estimated by DBEDT.

* Projected values were rounded to the nearest ten.

Source: DBEDT 2024b, DBEDT Long Range Projections 2050 Series Appendix Tables (spreadsheet), Table A-47, Maui County Civilian Wage and Salary Jobs by Sector, 2022-2050.

Although economic impacts likely would disproportionately benefit Maui County residents, impacts would accrue to local, County, and off-island residents to varying degrees, depending on the relative capacities of the Lahaina and nearby communities, Maui County, and State of Hawai‘i construction labor forces. Construction contract documents would reference Hawai‘i Revised Statutes (HRS) 103B, Employment of State Residents on Construction Procurement Contracts, which requires the contractor (including

subcontractors) to include not less than 80 percent Hawai‘i residents in the work force. This would limit the importation of workers from outside the local area and the associated increase in short-term demand for local housing.

Employment growth is beneficial to an economy, and expansion of the industry base results in economic benefits for the region. Overall, construction effects from the Proposed Action would be largely beneficial, providing short- and long-term regional economic benefits from construction spending and labor, as well as positive effects on employment and income in the region. However, connecting to a sewer system would be costly for homeowners.

With operation of Wahikuli Subdivision Gravity Sewer System, no or a negligible increase in County of Maui, Department of Environmental Management personnel is anticipated. Accordingly, no long-term effect on demographics, the demand for housing, or the housing inventory would occur.

Annual expenditures from operations of the Proposed Action would result in minor ongoing increases in economic output, employment, and earnings, and ongoing increases in fiscal revenues. Taken as a whole, operation effects from the Proposed Action would be largely beneficial, providing short- and long-term regional economic benefits from operation- and maintenance-related spending and labor, and positive effects on employment and income in the region. However, similar to connecting to the sewer system, contributing, as bill payers, to the cost of operating and maintaining the County wastewater system would be costly for homeowners.

The Proposed Action would be largely beneficial and would not adversely impact socioeconomic conditions and, therefore, no project-level mitigation is warranted. With respect to the costs to homeowners of connecting to the gravity sewer systems, and contributing to its operation and maintenance, the State of Hawai‘i and County of Maui are working to address institutional and financial support to low- and moderate-income property owners for implementing cesspool conversions.

3.16.2.2 No-Action Alternative

The No-Action Alternative would not implement a gravity sewer system for the Wahikuli subdivision. All property owners would need to upgrade or convert to an individual wastewater system (IWS) approved by the DOH by January 1, 2050, to comply with Act 125, as amended by Act 87, unless granted an exemption. Overall, the socioeconomic effects from such upgrades and conversions would be largely beneficial, providing short- and long-term regional economic benefits from construction spending and labor, as well as positive effects on employment and income in the region. However, for many households, the costs of upgrading or converting to an approved IWS could be prohibitive.

3.17 Traffic

3.17.1 Existing Conditions

The Project Area is served by a hierarchy of roadways providing access to the Island of Maui as a whole, the town of Lahaina, and within the Wahikuli subdivision. A brief description of the roadway network elements is provided below.

Route 30, Honoapi‘ilani Highway, is the main state highway connecting Lahaina to other locations in the northwest portion of Maui as well as the remainder of the island. Within the Project Area, it is a four-lane highway with separate center-turning lanes at intermittent locations to control east-west movements across the roadway. The posted speed limit is 40 MPH. The paved shoulder in both directions throughout this area is signed as a bike route.

‘Ainakea Road is a two-lane north-south local road connecting through the entire Wahikuli subdivision. The posted speed limit is 20 MPH and there are speed bumps across the entire roadway width on each segment between intersecting roadways. STOP control is in place on ‘Ainakea Road at each intersecting roadway. There are bus stop signs in place on ‘Ainakea Road near the intersections of Fleming Road, Wahikuli Road, and Kaniau Road.

Malo Street is a narrow two-way frontage road parallel to Route 30 between Wahikuli Road and Kaniau Road and adjacent to the abandoned narrow-gauge railroad tracks. The posted speed limit is 20 MPH and there are speed bumps between intersecting roadways. STOP control is in place on Malo Street at its intersections with Wahikuli Road and Kaniau Road.

Fleming Road, Wahikuli Road, and Kaniau Road are two-lane east-west roads that extend throughout the entire Wahikuli subdivision and provide direct access to Route 30. The intersection of Fleming Road/Route 30 is a four-way (with Front Street) signalized intersection. The intersection of Wahikuli Road/Route 30 is a three-way unsignalized full access intersection with STOP control on Wahikuli Road, while the intersection of Route 30/Kaniau Road has restricted access (right-turn only from the Stop-controlled Kaniau Road).

Malanai Street provides access (along with Kaniau Road) to Ku‘uipo Street, Aa Street, and Lokia Street within the subdivision. All subdivision roads are posted at 20 MPH.

Available traffic volumes in the Project Area were obtained from the State of Hawai‘i Department of Transportation Highways Program Status, Traffic Volume interactive map[5]. The following volumes for 2023 were available for roadways within the study area:

- Route 30: 37,300 vehicles per day (annual average daily traffic); and
- Ainakea Road: 2,244 vehicles per day (annual average daily traffic).

The Maui Metropolitan Planning Organization (2022) completed the *West Maui Greenway Plan* in 2022. The plan includes an alternative within the Project Area that uses the Malo Street/Sugar Cane Train narrow-gauge rail alignment as a potential component to the bicycle/pedestrian greenway plan.

3.17.2 Impacts and Mitigation Measures

Traffic impacts associated with the Proposed Action would comprise temporary construction impacts associated with the installation of gravity sewer lines and laterals. Construction traffic would be minimal, with the most noticeable impact occurring during construction crew mobilization and delivery and laydown of materials. Construction staging would be designed to minimize impacts to individual subdivision roadways and access to individual parcels. The configuration of the subdivision roadway network grid is conducive to short-duration detours (if necessary) which would add minimal traffic to individual roadways. Construction activity associated with individual property owners connecting to the proposed sewer system would also be negligible, as connections to the approximately 200 individual properties are expected to be spread out over the course of the 180-day connection period mandated by Maui County Code § 14.21A.010.

Under the No-Action Alternative, homeowners with cesspools or approved IWSs would require regular maintenance of those systems. Conservatively, if each of the approximately 200 individual properties require an outsourced annual maintenance, a total of about 400 vehicle trips (one entering and one exiting trip) would occur on the local roadway network. These trips, which would exist as part of normal background traffic under future conditions, represent a negligible amount of traffic when compared to reported annual average daily traffic on roadways within the Project Area and local network.

3.18 Noise

Noise, in its simplest definition, is unwanted sound. To establish a uniform noise measurement that simulates people’s perception of loudness and annoyance, the decibel measurement is weighted to account for those frequencies most audible to the human ear. This is known as the decibel A-weighted sound level, or “dBA,” and it is the descriptor of noise levels most often used for community noise analyses. The threshold of human hearing is defined as 0 dBA; very quiet conditions (as in a library or rural area at night) are approximately 40 dBA; levels between 50 dBA and 70 dBA define the range of

[5] https://histategis.maps.arcgis.com/apps/MapSeries/index.html?appid=39e4d804242740a89d3fd0bc76d8d7de

noise levels generated by normal daily activity; levels above 70 dBA would be considered noisy, and then loud, intrusive, and deafening as the scale approaches 130 dBA.

In considering these values, it is important to note that the dBA scale is logarithmic, meaning that each increase of 10 dBA describes a doubling of perceived loudness. Thus, the background noise in an office at 50 dBA is perceived as twice as loud as a library at 40 dBA. For most people to perceive an increase in noise, it must be at least 3 dBA. At 5 dBA, a change in noise level would be readily noticeable.

In accordance with HAR Title 11, DOH, Chapter 26 Community Noise Control, there is a classification of zoning districts which have defined maximum permissible sound levels in dBA applicable to stationary noise sources; and equipment related to agriculture, construction, and industrial activities.

3.18.1 Existing Conditions

The Project Area is in a residential area in a suburban setting with Honoapi‘ilani Highway along the west boundary. Exisiting noise conditions within the area vary and likely range from 50 to 60 dBA depending on the time of day and proximity to the highway.

3.18.2 Impacts and Mitigation Measures

Construction noise would temporarily increase sound levels in the immediate vicinity of the construction activities. Noise at construction sites varies relative to the particular operation in progress. EPA has published noise levels observed 50 feet from various types of construction equipment (EPA 1971). These levels range from 72 to 96 dBA for earth moving equipment, from 75 to 88 dBA for materials-handling equipment, and 68 to 87 dBA for stationary equipment such as pumps and compressors. Impact equipment may generate noise levels up to 105 dBA.

Distance rapidly diminishes noise from all sources with a 6-dBA reduction per doubling distance. For example, at a distance of 300 feet, the equipment noise would be reduced by 16 dBA as compared to the level observed at 50 feet. Therefore, several factors would affect temporary noise effects such as construction duration, construction site’s geographic surroundings and structural shielding, related pedestrian and vehicular activities, the distance between the public/residences and noise sources, and construction intensity. In general, construction activities would be short in duration with low noise intensity for the installation of the proposed gravity sewer system and would have a minor and temporary impact to noise sensitive land uses in or adjacent to the Project Area.

Operational noise associated with potential pump operation in certain areas would have adverse noise impacts to sensitive receptors. However, such noise impacts are considered minor and no mitigation measures are warranted.

3.19 Visual Considerations and Light Pollution

3.19.1 Existing Conditions

The *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) describes scenic views as public resources that contribute to residents’ quality of life and a driving force behind the visitor industry. The Project Area is located near the coastline, separated from the shore by Honoapi‘ilani Highway. Parks can also provide a scenic resource and there are two parks within the Wahikuli subdivision and one park outside the western boundary of the Project Area along the coastline. ‘Ainakea Park is located adjacent to ‘Ainakea Road near the intersection of Malanai Street, and Wahikuli Terrace Park in the Wahikuli Terrace subdivision is located at the southern end of the Project Area. Wahikuli Wayside Park is located along the shoreline outside of the Project Are but can be seen from the Wahikuli subdivision.

The County of Maui addresses light pollution and its effects on wildlife through Ordinance No. 5434 of the Maui County Code. As the ordinance states, “dark night skies hold important cultural, astronomical, biodiversity, and tourism related value, which is negatively impacted as a result of artificial lighting”

(County of Maui 2022). The Project Area is an existing subdivision with exterior lighting including streetlights suitable for residential areas.

3.19.2 Impacts and Mitigation Measures

Vistas and light pollution may be temporarily changed during construction of the Proposed Action. Visual impacts would include temporary staging of construction equipment and construction activities, but these impacts would cease at the completion of the project.

No night construction is anticipated. In the highly unlikely event that nighttime construction work is required, there may be temporary, portable lighting needed for public safety or construction, as authorized by Ordinance No. 5434, that would temporarily contribute to light pollution during construction. These impacts would end upon completion of the project.

There are no anticipated visual impacts or contributions to light pollution because of the operation of the Proposed Action.

3.20 Public Services – Police Protection

3.20.1 Existing Conditions

The Maui Police Department provides police protection services to the Lahaina region, which includes the Wahikuli subdivision and other nearby communities. Maui County has six main stations and a dozen substations (County of Maui 2010). One of the main stations is located in Lahaina approximately 0.3 miles north of the Project Area. Besides patrol duties, the District IV, Lahaina patrol district also includes the following programs: Community Oriented Policing, School Resource Officer, Bike Detail, Visitor Oriented Policing, Parks Patrol Officer, Citizens Patrol, and Parking Enforcement Officer (Maui Police Department 2025).

3.20.2 Impacts and Mitigation Measures

The Proposed Action is expected to create no additional demand for police protection and related services as it would not increase the resident population or visitors to the area. The Proposed Action should have minimal impact on the Maui Police Department's operations or ability to provide adequate protective services to the surrounding community.

3.21 Public Services – Fire Protection

3.21.1 Existing Conditions

The County of Maui Department of Fire and Public Safety provides emergency and non-emergency services for the Islands of Maui, Molokaʻi, Lānaʻi, and Kahoʻolawe and the surrounding waters. The Department has 14 fire stations throughout the County, 10 of which are on the Island of Maui (County of Maui 2010, County of Maui Department of Fire and Public Safety 2025). Fire protection and related services are provided from a fire station located in Lahaina approximately 0.4 miles north of the Project Area. The station provides 24-hour fire protection and emergency medical services. The County has contracted with the State DOH for emergency medical ambulance services.

3.21.2 Impacts and Mitigation Measures

The Proposed Action would not adversely affect the operations of fire protection, and emergency and non-emergency services in Lahaina, and the proposed gravity sewer system would not require additional fire protection services. The construction plans would be submitted to the Fire Department for review during project design.

The proposed gravity sewer system would be designed according to National Fire Prevention Association NFPA 820, Standard for Fire Protection in Wastewater Treatment and Collection Facilities. In accordance with County of Maui Department of Fire and Public Safety requirements, department access to the Project

Area would be designed to comply with Chapter 18 of the National Fire Prevention Association NFP1, Fire Code, 2012 Edition as amended by the County (Code of Ordinances, Chapter 16.04C - Fire Code).

3.22 Infrastructure – Water System

3.22.1 Existing Conditions

There are nine public water systems in four districts on the Island of Maui (County of Maui Planning Department 2012). The West Maui District includes the Lahaina public water system and the Honokōhau public water system that supply Lahaina, Honokōwai, ʻAlaeloa-Kahana, Nāpili, and Honokōhau, and spans Kāʻanapali region. The West Maui District water sources include ground and surface water with an available supply for the water system of 8 million gallons per day.

3.22.2 Impacts and Mitigation Measures

The Proposed Action is not anticipated to impact the water system infrastructure within the Project Area. Any existing water infrastructure, either aboveground or underground, would be confirmed and identified during the design process. The proposed gravity sewer system would avoid waterlines servicing the Wahikuli subdivision. During construction, safety procedures would be followed to avoid impacts to existing utilities.

3.23 Infrastructure – Drainage System

3.23.1 Existing Conditions

The stormwater drainage systems in Lahaina are designed to decrease flooding by carrying stormwater runoff through drains and underground pipes to nearby streams and eventually the ocean. These drainage systems generally do not provide treatment for runoff before reaching surface waters and rely upon public education and participation in order to reduce pollutant levels in stormwater.

The County of Maui, State of Hawaiʻi Department of Transportation, and Federal Highway Administration have previously installed emergency stormwater capture systems in Lahaina to reduce the environmental impacts from silt, ash, and other disaster debris potentially entering storm drainage systems because of the 2023 Lahaina wildfires. As a part of the emergency capture system installation, the Hawaiʻi Department of Transportation developed a map of the Lahaina drainage system and the locations of each stormwater management structure (State of Hawaiʻi Department of Transportation 2023).

The current drainage system within the Project Area consists of 25 different County Stormwater Structures (stormwater drainage structures) that capture stormwater runoff flow from the street. These stormwater drainage structures convey stormwater runoff towards a stormwater outlet. This outlet is located just north of the abandoned Lahaina No.3 Pump Station and discharges stormwater flow into the ocean.

All stormwater drainage structures identified within the Project Area are situated north of Wahikuli Road. While the southern portion of the Project Area lacks stormwater drainage structures, it is anticipated that runoff from these areas flows according to the area's topography and subsequently enters stormwater drainage structures located both within the Project Area and along its perimeter. Any runoff that does not enter into stormwater drainage structures gradually sheet flows towards surface water or grassland areas.

3.23.2 Impacts and Mitigation Measures

The Proposed Action would incorporate appropriate stormwater and erosions control measures in accordance with approved plans to ensure that soil erosion and transportation during construction activities are minimized. Construction of the proposed gravity sewer system would require trenches for new lines, and silt fences or filter socks would be used to minimize runoff from disturbed areas. The proposed gravity sewer system would avoid existing drainage culverts and waterlines servicing the Wahikuli subdivision. No increase in flow amount would be directed to existing drainage culverts as a

result of the gravity sewer system installation. Construction of the gravity sewer system would not increase impervious surfaces, and the site would be restored upon completion of the project.

The construction of the Proposed Action would result in negligible short-term impacts to impervious surfaces within the Project Area and the Wahikuli subdivision and would not lead to a significant impact to runoff or the drainage system in the area.

3.24 Infrastructure – Electrical and Communications System

3.24.1 Existing Conditions

Maui County has a diversified network of transpacific cable systems (both fiber optic and analog), satellite communication systems, cellular and wireless facilities and other telecommunication and information systems (County of Maui Planning Department 2012). Hawaiian Telecom provides intrastate cellular, paging, mobile telephone and other telecommunications services overseen by the State of Hawai`i Public Utilities Commission (State of Hawai‘i Public Utilities Commission 2025).

The Public Utilities Commission regulates electric utility companies including Maui Electric Company, which serves the Island of Maui, Lāna‘i, and Moloka‘i (State of Hawai‘i Public Utilities Commission 2025).

3.24.2 Impacts and Mitigation Measures

Existing underground infrastructure would be identified prior to construction of the Proposed Action to avoid any potential for impacts during construction. Operation of the Proposed Action is not anticipated to significantly impact electrical or communication systems. Any grinder pumps installed as part of the Proposed Action would require additional electrical power; however, this would be minimal, especially as a majority of the Proposed Action comprises gravity sewer lines.

4. Cumulative Effects

The Proposed Action, constructing and operating a gravity sewer system for the Wahikuli subdivision in Lahaina, in combination with other past, present, or reasonably foreseeable future actions in the general vicinity of the Project Area, could contribute to cumulative improvements and impacts on certain environmental resources. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

4.1 Scope of Analysis

This section identifies the other past, present, or reasonably foreseeable actions that were considered and evaluated in this cumulative effects analysis.

4.1.1 Geographic Scope of Analysis

The extent of the cumulative effects analysis is generally limited to the geographic/natural boundaries of the affected resource areas. The Council on Environmental Quality (1997) handbook on *Considering Cumulative Effects Under the National Environmental Policy Act* indicates that the geographic extent for this analysis should be defined on a case-by-case basis and is dependent on the affected resources.

In defining the geographic scope for consideration of cumulative effects, the United States Environmental Protection Agency (EPA) considered the resources that would be affected by the Proposed Action (i.e., within the project impact zone); the type and intensity of those effects; and whether those affected resources extend beyond the project impact zone. As discussed throughout **Section 3**, the effects of the Proposed Action would generally be limited to the footprint of the project and the immediate vicinity, plus minimal traffic-related impacts during construction; the Proposed Action would not adversely affect protected species or historic properties; and it would not adversely affect surface waters that are part of a larger watershed (other than potential for temporary, minor construction-related runoff impacts that would be mitigated by adherence to best management practices [BMPs]).

Based on these considerations, this cumulative effects assessment includes past, present, and reasonably foreseeable actions located in Lahaina within the general vicinity of the Project Area. This scope is expected to more than fully encompass the full extent of resource areas that would potentially experience discernable effects from the Proposed Action and is commensurate with the type and intensity of the effects of the Proposed Action.

4.1.2 Past, Present, and Reasonably Foreseeable Actions within Geographic Scope of Analysis

4.1.2.1 Past and Present Actions

As noted in **Section 2.1.1**, the Wahikuli subdivision is bordered by the Ka Laʻi Ola temporary housing project site and the Kilohana temporary group housing site to the east:

- **Kilohana Temporary Group Housing** – The Federal Emergency Management Agency (FEMA) is providing temporary group housing in the form of approximately 169 alternative transportable temporary housing units on 36 acres at the Kilohana temporary group housing site, for eligible disaster victims displaced by the wildfires in Lahaina (FEMA 2024a). Civil construction was completed in November 2024 and construction of the final houses was completed in February 2025 (FEMA 2025). The first residents moved into Kilohana on November 22, 2024 (FEMA 2024b, FEMA 2025).

  Installation of the associated Fleming Road gravity sewer main was completed at the end of February 2025 and is expected to be operational after the 30-day testing is completed in mid-April (FEMA 2025).

- **Ka Laʻi Ola Temporary Housing** – The State of Hawaiʻi, the County of Maui, and nonprofit organization partners are developing Ka Laʻi Ola, a temporary housing development that will

provide a maximum of 450 modular residential units on 54 acres to house wildfire survivors who are ineligible for FEMA aid, for up to 5 years (State of Hawai‘i 2024, Construction Management & Development, Inc.). Construction is ongoing and will extend into August 2025 (Construction Management & Development, Inc. 2025). Residents began moving into Ka La‘i Ola in August 2024 on the 1-year anniversary of the wildfires.

Both the Kilohana group housing and the Ka La‘i Ola housing are being connected to the existing Lahaina sewer system and the Lahaina Wastewater Reclamation Facility.

The two temporary housing projects occupy portions of the first phase of the approximately 1,033-acre footprint of the future Villages of Leiali‘i Affordable Housing Project. According to the Villages of Leiali‘i Affordable Housing Final Environmental Impact Statement (Hawai‘i Housing Finance Development Corporation (HHFDC) 2012), the project is intended to primarily serve households employed in West Maui, as a mixed-use community with affordable and market-priced housing, as well as open, commercial, and light industrial spaces, and public facilities.

Groundbreaking for **Kaiāulu o Kūku‘ia Apartments**, part of the Villages of Leiali‘i master planned community, was held in July 2022, with construction slated to take 24 months (HHFDC 2021, 2025). Located to the south of the Kilohana temporary group housing site, the project will provide 200 affordable family housing units in 25 two-story, eight-plex buildings on 28.5 acres. Required offsite improvements include:

- a new waterline in a new public road along the east side of the development, and along Keawe Street Extension along the south side; and
- a new wastewater sewer line extending either to the north and connecting to the Lahaina No. 3 Pump Station via the new gravity sewer main along Fleming Road or extending to the west and connecting to the pump station via Kapunakea Street.

4.1.2.2 Reasonably Foreseeable Actions

An additional part of the Villages of Leiali‘i master planned community, **Villages of Leiali‘i, Village 1-B Subdivision**, is planned to the north of the existing Villages of Leiali‘i Phase I-A, which in turn is located north of the Wahikuli subdivision. The subdivision will consist of 181 single-family homes, developed in two increments, that will be made available to State of Hawai‘i Department of Hawaiian Home Lands (DHHL) native Hawaiian beneficiaries. Required offsite improvements include (DHHL 2023):

- development of two offsite retention basins east of Village 1-B;
- adjustments of the outlet drainage pipes in the existing retention basin east of Phase 1-A;
- grading and development of drainage interceptor ditches east of Village 1-B;
- roadway improvements on Leiali‘i Parkway and Honoapi‘ilani Highway (State Route 30); and
- roadway repairs to existing portions of Leiali‘i Parkway.

Project construction will be initiated following receipt of applicable County and State agency approvals and budget approvals. Off-site improvements and the first increment of the proposed subdivision are expected to be completed in approximately 3 years while the second increment is anticipated to be completed 1 year thereafter. For the Village 1-B Subdivision environmental assessment (EA) traffic analysis, the year 2030 was selected to reflect the project completion year.

4.1.2.3 Evaluated Actions

As discussed in **Section 2.7**, construction of the Wahikuli subdivision gravity sewer system could begin as early as Winter 2026-27 and take approximately 12 months to complete. Each Wahikuli subdivision property owner would manage the tying in of their property to the new sewer system. Maui County Code

§ 14.21A.010 would require that they establish a direct connection with the system within 180 days after the date of official notice.

Although the precise construction schedules of the Proposed Action and the above past, present, and reasonably foreseeable actions within Lahaina are not known, it is anticipated that construction of the Wahikuli subdivision gravity sewer system likely would overlap, in part, with construction of the Villages of Leialiʻi, Village 1-B Subdivision. Construction of the Village 1-B Subdivision likely may also overlap with operation of the Proposed Action. Operation of the Proposed Action and all the past, present, and reasonably foreseeable actions considered in this cumulative effects analysis would overlap.

4.2 Cumulative Improvements and Impacts Analysis

This analysis identified the following potential cumulative effects resulting from the Proposed Action and the past, present, and reasonably foreseeable actions:

- **Soil Disturbance, and Surface Water and Drainage Impacts –** Construction of the Proposed Action and the Villages of Leialiʻi, Village 1-B Subdivision would result in temporary soil disturbance and potential impacts to downgradient surface waters. Throughout construction, both projects would employ standard BMPs and mitigation measures, including sediment and erosion controls, to minimize potential impacts to soils and surface waters. Proposed Action disturbed areas would be restored following construction. At the Village 1-B Subdivision, disturbed areas would be developed as single-family homes, roadways, and landscaping, and the subdivision would utilize permanent sediment control measures (DHHL 2023).
- **Economic Benefits and Need to Import Construction Labor –** Both the Proposed Action and the Village 1-B Subdivision construction expenditures would result in one-time increases in economic output, employment, and earnings, and one-time increases in fiscal revenues of the State. However, the current and projected future County of Maui construction labor force might not be sufficient to fill the combined demand for construction workers, as well as ongoing and future regional demand. To the extent that this demand cannot be met locally, importation of workers from outside the local area and the associated increase in short-term demand for local housing may result.
- **Construction Traffic –** Construction traffic associated with the Proposed Action would be minimal, with the most noticeable impact occurring during construction crew mobilization and delivery and laydown of materials. Although not analyzed for the Village 1-B Subdivision EA (DHHL 2023), it is expected that constructing the subdivision will impact traffic on local roads, likely to a greater degree than would construction of the Proposed Action gravity sewer system. The combined construction traffic increment attributable to the two projects may result in minor increases in traffic on Honoapiʻilani Highway and other local roads during construction.
- **Noise –** Construction noise associated with the Proposed Action and the Village 1-B Subdivision would temporarily increase sound levels in the immediate vicinity of the construction activities. Construction activities generally would have a minor and temporary impact to noise sensitive land uses in or adjacent to the respective construction sites, and minor cumulative effects could occur if and where the increased sound levels attributable to the two projects overlap.

No significant operational cumulative effects are anticipated to result from the Proposed Action and the past, present, and reasonably foreseeable actions.

Based on the above, the Proposed Action is not expected to result in any significant cumulative improvements or impacts to the environment in combination with other past, present, or reasonably foreseeable actions.

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5. Federal Crosscutter Requirements

This project may be funded by federal funds provided by U.S. Environmental Protection Agency (EPA) through the State of Hawai'i's Clean Water State Revolving Fund (CWSRF) Program. As such, the State of Hawai'i Department of Health (DOH) must conduct an environmental review of projects funded under the CWSRF as required under the Code of Federal Regulations (CFR), using the EPA-approved State Environmental Review Process. In addition, the State must comply with the federal cross-cutting authorities set forth in 40 CFR § 35.3145 for the CWSRF. These requirements are set forth as "cross cutters" described as follows.

In addition to the cross cutters required by the EPA-approved State Environmental Review Process, EPA guidance for conducting environmental reviews for Special Appropriations Act Project (SAAP) grants requires the inclusion of one additional cross cutter—specifically, the Clean Water Act, which has been added as **Section 5.2**.

5.1 Archaeological and Historic Preservation Act, 54 U.S.C. § 312502

The Archaeological and Historic Preservation Act (AHPA), also known as the Archaeological Recovery Act and the Moss-Bennett bill, was passed and signed into law in 1974. It amended and expanded the Reservoir Salvage Act of 1960. The AHPA built upon the national policy, set out in the Historic Sites Act of 1935, "to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance." The AHPA expanded the policy by focusing attention on significant resources and data but does not require that they be shown to be of "national" significance. The AHPA required that federal agencies provide for the preservation of historical and archaeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of any alteration of the terrain caused as a result of "any Federal construction project or federally licensed project, activity, or program."

54 United States Code (U.S.C.) § 312502 (a)(1) states: "When any Federal agency finds, or is notified, in writing, by an appropriate historical or archeological authority, that its activities in connection with any Federal construction project or federally licensed project, activity, or program may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, the agency shall notify the Secretary [of the Interior], in writing, and shall provide the Secretary with appropriate information concerning the project, program, or activity."

54 U.S.C. § 312502 (b)(1) states: "When any Federal agency provides financial assistance by loan, grant, or otherwise to any private person, association, or public entity, the Secretary, if the Secretary determines that significant scientific, prehistorical, historical, or archeological data might be irrevocably lost or destroyed, may, with funds appropriated expressly for this purpose—

(A) conduct, with the consent of all persons, associations, or public entities having a legal interest in the property, a survey of the affected site; and
(B) undertake the recovery, protection, and preservation of the data (including analysis and publication)."

Based on the information collected through the National Historic Preservation Act (NHPA) Section 106 process, the current project is not considered a threat of irreplaceable loss or destruction of significant scientific, prehistorical, historical, or archaeological data. The Federal Emergency Management Agency (FEMA) conducted a good faith effort to identify and evaluate historic properties within the area of potential effect (APE) through background research, consultation, and a field survey. Although no eligible historic properties were identified within the APE, FEMA has committed to conditions and future actions to avoid, minimize or mitigate adverse effects (see **Sections 3.15.2.1 and 3.15.2.2**).

5.2 Clean Air Act, 42 U.S.C. § 7401 et seq.

Over the years, there have been a series of legislations affecting air quality and a number of amendments adopted related to air quality. The Air Pollution Control Act of 1955 was the first federal legislation involving air pollution and was followed by the Clean Air Acts of 1963 and 1970. The Clean Air Act of 1970 (1970 CAA, 42 U.S.C. § 7401 et seq.) authorized the development of comprehensive federal and state regulations to limit emissions from both stationary (industrial) sources and mobile sources.

The 1970 CAA set forth four major regulatory programs affecting stationary sources: the National Ambient Air Quality Standards, State Implementation Plans (SIPs), New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants. In Hawai‘i, the DOH, Clean Air Branch, Air Quality program is defined by Hawai‘i Administrative Rules (HAR) 11-60.1 and serves as the SIP approved by EPA.

The 1990 amendments to the Clean Air Act require federal agencies to ensure that their actions conform to the SIP in a nonattainment area. The SIP provides for implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS); it includes emission limitations and control measures to attain and maintain the NAAQS. Conformity to a SIP, as defined in the Clean Air Act, means conformity to a SIP’s purpose of reducing the severity and number of violations of the NAAQS to achieve attainment of the standards. The federal agency responsible for a proposed action is required to determine if its proposed action conforms to the applicable SIP. The 1990 amendments also established the Title V Operating Permit program applicable to certain stationary sources/facilities that would require an air permit to operate.

Potential air emissions during both construction and operational phases are anticipated to be minor as discussed in **Section 3.14** and the Proposed Action would meet the requirements established in the Clean Air Act and its subsequent amendments.

As the proposed gravity sewer system is not anticipated to involve installation or upgrade of stationary combustion sources at any pump stations, the Clean Air Act major regulatory programs affecting stationary sources including the air permitting program likely would not be applicable. However, during the design phase, the non-applicability will be reevaluated to ensure potential stationary source operation would be permitted per the requirements established in the Clean Air Act.

5.3 Coastal Barrier Resources Act, 16 U.S.C. § 3501

In 1982, Congress passed the Coastal Barrier Resources Act (CBRA) (16 U.S.C. § 3501) to minimize the loss of human life; wasteful expenditure of federal revenues; and the damage to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf coasts and along the Great Lakes by restricting future federal expenditures and financial assistance which have the effect of encouraging development of coastal barriers, such as federal flood insurance through the National Flood Insurance Program.

The Coastal Barrier Resources Reauthorization Act of 2000 reauthorized the CBRA and directed the United States Fish and Wildlife Service (USFWS) to complete a Digital Mapping Pilot Project that includes digitally produced draft maps for up to 75 John H. Chafee Coastal Barrier Resources System (CBRS) areas and a report to Congress that describes the feasibility and costs for completing digital maps for all CBRS areas. The CBRS includes 3.8 million acres along the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts.

The CBRA is not applicable to Hawai‘i, based on its location.

5.4 Coastal Zone Management Act, 16 U.S.C. § 1451

The Coastal Zone Management Act of 1972 (CZMA) (16 U.S.C. §§ 1451-1464) was passed to establish a national policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations and to encourage coastal states to develop and implement coastal zone management (CZM) programs. Each federal agency activity within or outside

the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved state management programs. Each federal agency carrying out an activity subject to the Act shall provide a consistency determination to the relevant state agency designated under § 1455(d)(6) of this title at the earliest practicable time.

In 1977, Hawai‘i enacted HRS 205A, Coastal Zone Management. The CZM area encompasses the entire state, including all marine waters seaward to the extent of the state's police power and management authority, including the 12-mile U.S. territorial sea and all archipelagic waters. The objective and policies of the CZM Program are set forth in HRS § 205A-2.

The objectives and policies in HRS Chapter 205A-2 were reviewed, and it has been determined that the Proposed Action is consistent with the objectives and policies of Chapter 205A-2 to the maximum extent practicable. See detailed discussion in **Section 6**.

5.5 Endangered Species Act, 16 U.S.C. § 1531

On December 28, 1973, the Endangered Species Act (16 U.S.C. § 1531) was passed and, over the years, has been amended several times. The stated purpose of the original Act was to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of various related treaties and conventions. The provisions of the Act are administered by the USFWS and the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while NMFS is mainly responsible for marine wildlife.

Section 7 of the Act, Interagency Cooperation (16 U.S.C. § 1536), states: "Each federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior], insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action …."

The provisions in Section 7 of the Act (16 U.S.C. § 1536) were reviewed, and it has been determined that the Proposed Action would not have substantial effects to rare, threatened, or endangered species, or their habitats. **Sections 3.12 and 3.13** include lists of threatened and endangered species with the potential to be present in the vicinity of the Project Area. The project is not anticipated to adversely affect any listed species. In addition, as discussed in **Sections 3.12.2 and 3.13.2**, numerous measures have been incorporated into the project to further avoid and minimize potential effects.

5.6 Farmland Protection Policy Act, 7 U.S.C. § 4201

The Agriculture and Food Act was passed in 1981 and contained the Farmland Protection Policy Act (FPPA). The stated purposes of the FPPA are to: 1) minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses; and 2) assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland. "Farmland" subject to FPPA requirements does not have to be currently used for cropland.

The FPPA is administered by the United States Department of Agriculture, National Resources Conservation Service. "Farmland," as used in the FPPA, includes prime farmland, unique farmland, and land of statewide or local importance, as defined in Hawai‘i by the State of Hawai‘i Department of Agriculture.

Per the Agricultural Lands of Importance to the State of Hawai‘i (ALISH) Classification System, the Project Area encompasses “unclassified” lands (Hawai‘i Statewide GIS Program 2024a). No prime farmland, unique farmland, or land of statewide or local importance is present. Implementing the Proposed Action would not require farmland conversion.

5.7 Floodplain Management, Executive Order 11988, as amended by Executive Orders 12148 and 13690

Executive Order 11988, Floodplain Management, dated May 24, 1977, requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

In accomplishing this objective, "Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands, and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.”

Most of the Project Area is not located within a 100-year floodplain area, although a narrow strip of land along Malo Street on the west edge of the project boundary is in an AE zone, an area subject to inundation by the 1-percent-annual-chance flood event with a known base flood elevation. Construction activities would cause temporary disturbance to the area during installation of the gravity sewer system. Once construction is complete, areas will be returned to preconstruction grade and restored. The Proposed Action would not have an adverse impact on floodplains and would minimize the risk of flood-related impacts on surrounding properties.

5.8 Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801

The 1996 Sustainable Fishery Act amendments to the Magnuson-Stevens Fishery Conservation and Management Act and subsequent Essential Fish Habitat (EFH) Regulatory Guidelines (NOAA 2002) describe provisions to identify and protect habitats of federally managed marine and anadromous fish species. Under the various provisions, federal agencies that fund, permit, or undertake activities that may adversely affect EFH are required to consult with the NMFS.

Congress defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” EFH is further defined by the existing regulations (NOAA 2002, NOAA-NMFS 2007). “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.

The Project Area is located mauka, east, of Honoapi‘ilani Highway, State Route 30, and a minimum of 100 feet from the shoreline of the ‘Au‘au Channel in the Pacific Ocean. The Proposed Action would not adversely impact EFH.

5.9 National Historic Preservation Act, 54 U.S.C. § 300101 et seq.

The NHPA of 1966 requires a federal agency undertaking an action/project to consider the effect of the project on any historic property defined as a district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. Section 106 of the NHPA (54 U.S.C. § 306108) requires a federal agency having direct or indirect jurisdiction over a federal or federally assisted

undertaking to consider the effect of the undertaking on any historic property. An “undertaking” includes a “project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency” (54 U.S.C. § 300320).

The Act requires the federal agency’s preservation-related activities to be “carried out in consultation with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations carrying out historic preservation planning activities, and the private sector” (54 U.S.C. § 306102(b)(4)). To meet these statutory requirements, FEMA has opted to use the Programmatic Agreement currently in effect with FEMA, the State Historic Preservation Officer, the Office of Hawaiian Affairs, and the Hawai‘i Emergency Management Agency, executed in 2016, as extended through amendment in 2023.

FEMA has made a reasonable and good faith effort to carry out appropriate identification efforts, which included background research, consultation, and a field survey. The field survey was conducted by SWCA Environmental Consultants, and the results are presented in an archaeological literature review and field inspection report (Gross and Hopkins 2024).

The background research indicates the Project Area includes the original Wahikuli Homestead lots built from the 1920s to the 1960s. The homesteads were built over the former Pioneer Mill Co. Ltd. agricultural fields. Although the construction of the homestead lots resulted in the complete grading of the former agricultural fields, some remnants of the Pioneer Mills operations remained. Due to modifications and impacts from the Lahaina wildfires on August 8, 2023, the homesteads do not meet the standards to be considered eligible to the National Register of Historic Places.

The field inspection confirmed the presence of two historic railroad corridors (State Inventory of Historic Properties (SIHP) #s 50-50-03-08886 and 50-50-03-08887) occurring just outside of the east and west boarders of the APE. The railroad corridors were previously identified during an archaeological inventory survey conducted by Cultural Surveys Hawai‘i, Inc. (Madeus et al. 2022). The railroads would not be impacted by the current project.

Two additional archaeological historic properties have been previously identified within the APE. These include the Haluluko‘ako‘a Heiau (SIHP # 50-50-03-00011) and disarticulated human remains (SIHP # 50-50-03-09023). Based on the information available, the heiau was likely located within or near the modern day Wahikuli Terrace Park property; however, no surface remains exist today. The human remains were inadvertently discovered during the Kilohana temporary group housing site project. However, the remains were not interpreted as an *in-situ* burial site and were relocated from the roadway. Neither of the archaeological historic properties are considered eligible to the Nation Register of Historic Places.

FEMA determined that there are no eligible historic properties as defined in 36 CFR 800.16(l) within the APE; found the undertaking would result in *No Historic Properties Affected* pursuant to 36 CFR 800.4(d)(1); and initiated the Standard Project Review in accordance with Stipulation II.C. of the Programmatic Agreement (see **Section 3.15.2.1**). FEMA proposes the following conditions and future actions to further avoid, minimize, or mitigate adverse effects:

- The locations of the railroad alignment (SIHP No. 50-50-30-08886 and 50-50-03-08887) just outside the APE and the inadvertent discovery of human remains (SIHP No. 50-50-03-09023) previously identified within the APE would be annotated on the project related construction plans.
- Archaeological monitor(s) who meets the Secretary of the Interior Professional Qualifications Standards for that discipline, and is based in Hawai‘i, would be on site during all new ground disturbing activities.
- A cultural monitor would be on site during all new ground disturbing activities.
- In the event of an inadvertent discovery of human remains, the process outlined in Stipulation III.B. of the Programmatic Agreement and HAR §13-300-40 would be followed. Additionally, the federal agency will follow 11 of the 13 principles developed by the ACHP in the policy statement on burial sites, human remains, and funerary objects as they pertain to the current undertaking.

5.10 Protection of Wetlands, Executive Order 11990, as amended by Executive Order 12608

Executive Order 11990, Protection of Wetlands, dated May 24, 1977, requires federal agencies to avoid, preserve, or mitigate effects of new construction projects on lands which have been designated wetlands. Executive Order 11990 states, in order to avoid to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or Indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. (a) Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities."

The USFWS (2024) National Wetlands Inventory Wetlands Mapper, United States Geological Survey Lahaina Quadrangle topographic map, and Hawai'i Statewide GIS Program (2024b) Wetlands in the State of Hawai'i data layer identify no wetland features or streams within the Project Area. A site visit on September 26, 2024, and terrestrial flora and fauna survey completed on November 5, 2024 (SWCA Environmental Consultants 2024) did not identify any wetlands in the Project Area. The Proposed Action is not expected to impact wetland resources.

5.11 Sole Source aquifer, Section 1424(e) of the Safe Drinking Water Act, 42 U.S.C. § 300h-3e

The Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. § 300f) was established to protect the quality of all waters actually or potentially designed for drinking use from both underground and aboveground sources. The SDWA authorizes EPA to establish minimum standards to protect potable water with which all owners or operators of public water systems must comply; to oversee the agencies which can be approved to implement these rules on EPA's behalf, such as state governments; and to encourage attainment of secondary standards (nuisance-related). Section 1424(e) of the SDWA of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq) also established the Sole Source Aquifer program which states that no commitment for federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the EPA Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health.

The Proposed Action does not establish a drinking water system, and no sole source aquifers are present on the Island of Maui. The Proposed Action would provide the infrastructure necessary to enable the County to comply with the SDWA by replacing existing cesspools and leaking septic systems that pose a threat to underground sources of drinking water.

5.12 Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-1287

The Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-1287, declares that certain selected rivers with their immediate environments, which possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historical, cultural, or other similar values, shall be preserved in their free-flowing condition for the enjoyment of present and future generations.

The State of Hawai'i has no designated wild and scenic rivers. Therefore, the Wild and Scenic Rivers Act is not applicable to this project.

5.13 Super Crosscutters

The following four laws prohibit discrimination, on the basis of race, color, national origin, sex, handicap, or age, in the provision of services or benefits in programs or activities receiving federal financial assistance. All recipients of federal assistance must comply with these super crosscutters.

- **Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d** – Title VI states: “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”
- **Section 13 of the Clean Water Act Amendments of 1972, 33 U.S.C. § 1251** – Section 13 provides: “No person in the United States shall on the ground of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance under this Act, the Federal Water Pollution Control Act, or the Environmental Financing Act.”
- **Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 794** – Section 504 states: “No otherwise qualified individual with a disability in the United States, as defined in section 705(20) of this title, shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.”
- **The Age Discrimination Act of 1975, 42 U.S.C. § 6102** – Section 6102 states: “Pursuant to regulations prescribed under section 6103 of this title, and except as provided by section 6103(b) and section 6103(c) of this title, no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.”

Title VI of the Civil Rights Act, the Rehabilitation Act, and the Age Discrimination Act were amended in 1988 to clarify that their anti-discrimination provisions apply to the entire operations of an assistance recipient, not just to the specific program, project, or activity that is the objective of the assistance. The reach of these statutes and Section 13 of the Clean Water Act, which contains language instructing EPA to treat its sex discrimination provisions in a manner similar to the Civil Rights Act, extends beyond that of other cross-cutting authorities. (EPA 2003)

As discussed in **Section 2.1.3**, the Wahikuli Subdivision Gravity Sewer System project may be funded by both federal and state funds, including the State of Hawai‘i DOH Clean Water State Revolving Fund (CWSRF) Program. As posted on September 29, 2023, on the News Releases from Department of Health website:

> The Hawai‘i Department of Health (HDOH) does not discriminate on the basis of race, color, sex, national origin, age, or disability, or any other class as protected under applicable federal or state law, in administration of its programs, or activities, and, the HDOH does not intimidate or retaliate against any individual or group because they have exercised their rights to participate in actions protected, or oppose action prohibited, by 40 C.F.R. Parts 5 and 7, or for the purpose of interfering with such rights.
>
> The HDOH Non-Discrimination Coordinator is responsible for coordination or compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Parts 5 and 7 (Non-discrimination in Programs or Activities Receiving Federal Assistance from the Environmental Protection Agency), including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975; Title IX of the Education Amendments of 1972; Section 13 of the Federal Water Pollution Control Act Amendments of 1972, and the Americans with Disabilities Act of 1990, as amended (hereinafter collectively referred to as the federal non-discrimination laws).

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6. Plans, Policies, and Controls

6.1 State Land Use Plans and Policies

The State of Hawai'i maintains a statewide planning system that includes State and County land use plans, policies, and controls to provide standards and guidelines for development. At the State level, this environmental assessment (EA) assesses the Proposed Action's compliance and consistency with the Hawai'i Environmental Policy Act (HEPA), Coastal Zone Management (CZM) Program, State Land Use Classification, Hawai'i State Plan (HSP), State Functional Plans, and the Hawai'i 2050 Sustainability Plan. Appropriate plans, policies, and controls to assist in evaluating the options to best meet future needs are referenced below.

6.1.1 Hawai´i Environmental Policy Act (HEPA)

The HEPA outlines the process of environmental review for the State and counties, HEPA is codified in Hawai'i Revised Statutes (HRS) Chapter 343 and implemented through Hawai'i Administrative Rules (HAR) Title 11, Chapter 200.1. The review ensures that environmental concerns are appropriately considered in decision making. For the Proposed Action, an environmental review is required because the action involves the following (HRS 343-5(a)):

> (1) Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects that the agency has not approved, adopted, or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies; provided further that an environmental assessment for proposed uses under section 205-2(d)(11) or 205-4.5(a)(13) shall only be required pursuant to section 205-5(b).
>
> (3) Propose any use within a shoreline area as defined in section 205A-41.
>
> (9)(A) Proposed wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent.

This EA was prepared in accordance with all applicable provisions from both HRS Chapter 343 and HAR Title 11, Chapter 200.1.

6.1.2 Hawai'i Coastal Zone Management Program

Per the national Coastal Zone Management Act (CZMA) of 1972, the Hawai'i's CZM Program outlines objectives and policies to guide the effective management, beneficial use, protection, and development of the coastal zone. The entire State of Hawai'i is located within the jurisdiction of the CZM Program. Hawai'i's CZM program was established through HRS Chapter 205A. The objectives and policies in HRS Chapter 205A-2 were reviewed, and it has been determined that the Proposed Action is consistent with the objectives and policies of Chapter 205A-2 to the maximum extent practicable.

Tables 6-1 through 6-8 list applicable objectives and policies of HRS Chapter 205A-2, followed by a discussion of the consistency of the Proposed Action with them. Where an Objective and Policy section of HRS Chapter 205A-2 is not listed in the table, it has been analyzed and determined to be not applicable to the Proposed Action.

Table 6-1. CZMA Chapter HRS 205A Recreational Resources

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Recreational Resources				
Objective: **Provide coastal recreational opportunities accessible to the public.**				
Policies:		C	N/C	N/A
(A) Improve Coordination and funding of coastal recreational planning and management				X
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:				
	(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;	X		
	(ii) Requiring restoration of coastal resources that have significant recreational and ecosystem value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring monetary compensation to the State for recreation when restoration is not feasible or desirable;			X
	(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			X
	(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;	X		
	(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;			X
	(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;	X		
	(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			X
	(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting that dedication against the requirements of section 46-6.			X

Discussion: Temporary impacts to recreational resources may include noise and viewshed impacts associated with the construction and staging phases of the project. ʻAinakea Park is located within the Wahikuli subdivision and Wahikuli Terrace Park is located within the Wahikuli Terrace subdivision. Wahikuli Wayside Park and the Lahaina Civic Center are located outside but near the Project Area. None of the proposed gravity sewer lines would be installed within the boundaries of a park or recreational facility. Slight delays in travel time to these facilities may result from construction taking place on a small portion of Honoapiʻilani Highway, State Route 30, but access to public recreational facilities would not be impeded. Therefore, no long-term negative impacts to recreational resources are anticipated for this project.

The project would eliminate the use of individual wastewater systems (IWSs) within the Wahikuli subdivision and implement a gravity sewer collection system. This would help minimize potential groundwater pollution and potential seepage into Class A waters along the Wahikuli Wayside Park and Lahaina coastline. Mitigating groundwater

pollution and potential seepage into coastal waters would also protect coral reefs, which are coastal resources uniquely suited for recreational activities that cannot be provided in other areas, such as scuba diving and surfing.

Table 6-2. CZMA Chapter HRS 205A Historic Resources

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Historic Resources			
Objective: **Protect, Preserve, and, where desirable, restore those natural manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.**			
Policies:	C	N/C	N/A
(A) Identify and analyze significant archaeological resources;	X		
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and	X		
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	X		
Discussion: Through project review processes, including the NHPA Section 106, FEMA and the SHPO determined that project would have no adverse effect on historic properties within the Project Area. However, FEMA committed to incorporating avoidance and minimization measures to avoid potential effects to historic properties and SHPO requested that Archaeological monitoring conventions be implemented.			

Table 6-3. CZMA Chapter HRS 205A Scenic and Open Space Resources

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Scenic and Open Space Resources			
Objective: **Protect, Preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.**			
Policies:	C	N/C	N/A
(A) Identify valued scenic resources in the coastal zone management area;	X		
(B) Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;	X		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and	X		
(D) Encourage those developments that are not coastal dependent to locate in inland areas;			X
Discussion: The Project Area is located almost entirely within a residential zone that was used for residential housing until it was impacted by the August 2023 wildfires. The Proposed Action would construct a gravity sewer system within the existing Wahikuli residential subdivision. The gravity sewer system would be completely underground and would result in only temporary impacts to coastal scenic viewsheds due to construction activity. The Proposed Action would eliminate the use of IWSs within the subdivision, which would help mitigate the impacts of potential groundwater pollution. This would help to preserve and maintain scenic coastal resources by minimizing the seepage of non-point source groundwater pollution into Class A waters along Wahikuli Wayside Park and thereby protecting nearshore waters and coral reefs.			

Table 6-4. CZMA Chapter HRS 205A Coastal Ecosystems

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Coastal Ecosystems			
Objective: Protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes, from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies:	C	N/C	N/A
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			X
(B) Improve the technical basis for natural resource management;			X
(C) Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;	X		
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			X
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	X		
Discussion: The Proposed Action would help to both preserve valuable coastal ecosystems and promote water quality management practices. Eliminating cesspools with the installation of a gravity sewer system would enhance water quality by mitigating impacts to groundwater systems and Class A waters along Wahikuli Wayside Park and along the Lahaina coastline associated with non-point source pollution. The Proposed Action would improve water quantity management practices by using the gravity sewer system to collect wastewater. This wastewater would be conveyed to the Lahaina Wastewater Reclamation Facility, where it would undergo treatment. The treated effluent would then be either disposed of safely or reused. The Proposed Action would protect nearshore waters and coastal ecosystems, including coral reefs.			

Table 6-5. CZMA Chapter HRS 205A Economic Uses

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Economic Uses			
Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies:	C	N/C	N/A
(A) Concentrate coastal dependent development in appropriate areas;	X		
(B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and	X		
(C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of designated areas when: (i) Use of designated locations is not feasible; (ii) Adverse environmental effects and risks from coastal hazards are minimized; and (iii) The development is important to the State's economy;	X		
Discussion: The Proposed Action would create a more resilient wastewater management system, better equipped to withstand climate impacts and disasters. The proposed project aims to improve wastewater management to protect human health, nearshore waters, and corals reefs while minimizing the seepage of pollutants from the cesspools into Class A waters along Wahikuli Wayside Park.			

The Proposed Action would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values. Refer to **Section 2.2** for a more detailed discussion.

Table 6-6. CZMA Chapter HRS 205A Coastal Hazards

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Coastal Hazards			
Objective: Reduce hazard to life and property from coastal hazards.			
Policies:	C	N/C	N/A
(A) Develop and communicate adequate information about the risks of coastal hazards;			X
(B) Control development, including planning and zoning control, in areas subject to coastal hazards;	X		
(C) Ensure that developments comply with requirements of the National Flood Insurance Program; and	X		
(D) Prevent coastal flooding from inland projects.			X
Discussion: Construction of the Proposed Action would not increase the likelihood of natural hazards occurring. Appropriate measures to mitigate hazards would be implemented, including designing to meet seismic, International Building Code, National Flood Insurance Program, and other federal, State, and County requirements. The improvements associated with the Proposed Action would be designed and constructed in compliance with current building codes to mitigate impacts from natural disasters and flooding, and would create a more resilient wastewater management system.			

Table 6-7. CZMA Chapter HRS 205A Managing Development

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Managing Development			
Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies:	C	N/C	N/A
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			X
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	X		
Discussion: The anticipated impacts resulting from the Proposed Action would have been identified and analyzed within this EA to determine their potential extent. Relevant public and private organizations, as well as residents within the proposed Project Area, are being notified that a draft version of this EA is available for public review and comment. The EA is being made available to the public well in advance of project implementation.			

Table 6-8. CZMA Chapter HRS 205A Beach Protection

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 205A: Beach Protection			
Objective:			
(A) Protect beaches and coastal dunes for: (i) Public use and recreation; (ii) The benefit of coastal ecosystems; and (iii) Use as natural buffers against coastal hazards; and			
(B) Coordinate and fund beach management and protection.			
Policies:	C	N/C	N/A
(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;	X		
(B) Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;			X
(C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;			X
(D) Minimize grading of and damage to coastal dunes;			X
(E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and			X
(F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.			X
Discussion: The Beach Protection Policies established under HRS § 205A mostly do not apply to this project, as most of the project work would take place outside of the 200-foot shoreline setback area. A small portion of the project would cross into the 200-foot setback area, including a handful of sewer segments along and connecting to Malo Street. However, it is not anticipated that any project activity would result in the loss of open space, interfere with natural shoreline processes, or increase the risk of impacts to structures due to erosion. For all activities that do enter into the shoreline setback area, necessary precautions and protections would be taken.			

6.1.3 State Land Use District

The Hawai‘i Land Use Commission administers the statewide zoning law under the authority granted by the State Land Use Law. The Land Use Commission regulates land use through land classification into one of four districts: Urban, Rural, Agricultural, and Conservation. The land classification system is intended to preserve, protect, and encourage development and preservation of lands for those uses to which they are best suited in the interest of public health and welfare of the people (HAR Title 15, Chapter 15). Each district has specific land use objectives and development constraints.

The Project Area extends over land within only one of the four land use districts (**Figure 6-1**):

- Urban District – areas with “city-like” concentrations of people, structures and services, and vacant areas for future development. Jurisdiction lies with the respective county through ordinance and rules. Uses that are permitted by the county are described in the Zoning Code (Section 1.2.5).

Urban districts are those lands that are now urban use and include a sufficient reserve area for foreseeable urban growth (HRS Chapter 205-2). Activities or uses provided by the ordinances or regulations of the county within which the urban district is situated, as well as geothermal resource exploration and geothermal resources, are permissible in the urban district. Permissible uses are subject to conditions imposed by the county commission.

6.1.4 Hawai‘i State Plan

The Hawai‘i State Plan, as codified in Hawai‘i Revised Statutes Chapter 226, provides guidance for future long-range development of the State by increasing coordination among different agencies and levels of government and providing a basis for determining priorities and allocation of resources.

The State plan outlines goals to achieve in order for present and future generations to obtain the elements of choice and mobility to ensure individuals and groups may approach their desired levels of self-reliance and self-determination. The goals include:

(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i’s present and future generations.

(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.

(3) Physical, social, and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and participation in community life.

There are several objectives and policies of the Hawai‘i State plan that include population, economy, physical environment, facility systems, and socio-cultural advancement. **Tables 6-9 through 6-21** list applicable objectives and policies of HRS Chapter 226, followed by a discussion of the consistency of the Proposed Action with them. Where an Objective and Policy section of HRS Chapter 226 is not listed below, it has been analyzed and determined to be not applicable to the Proposed Action.

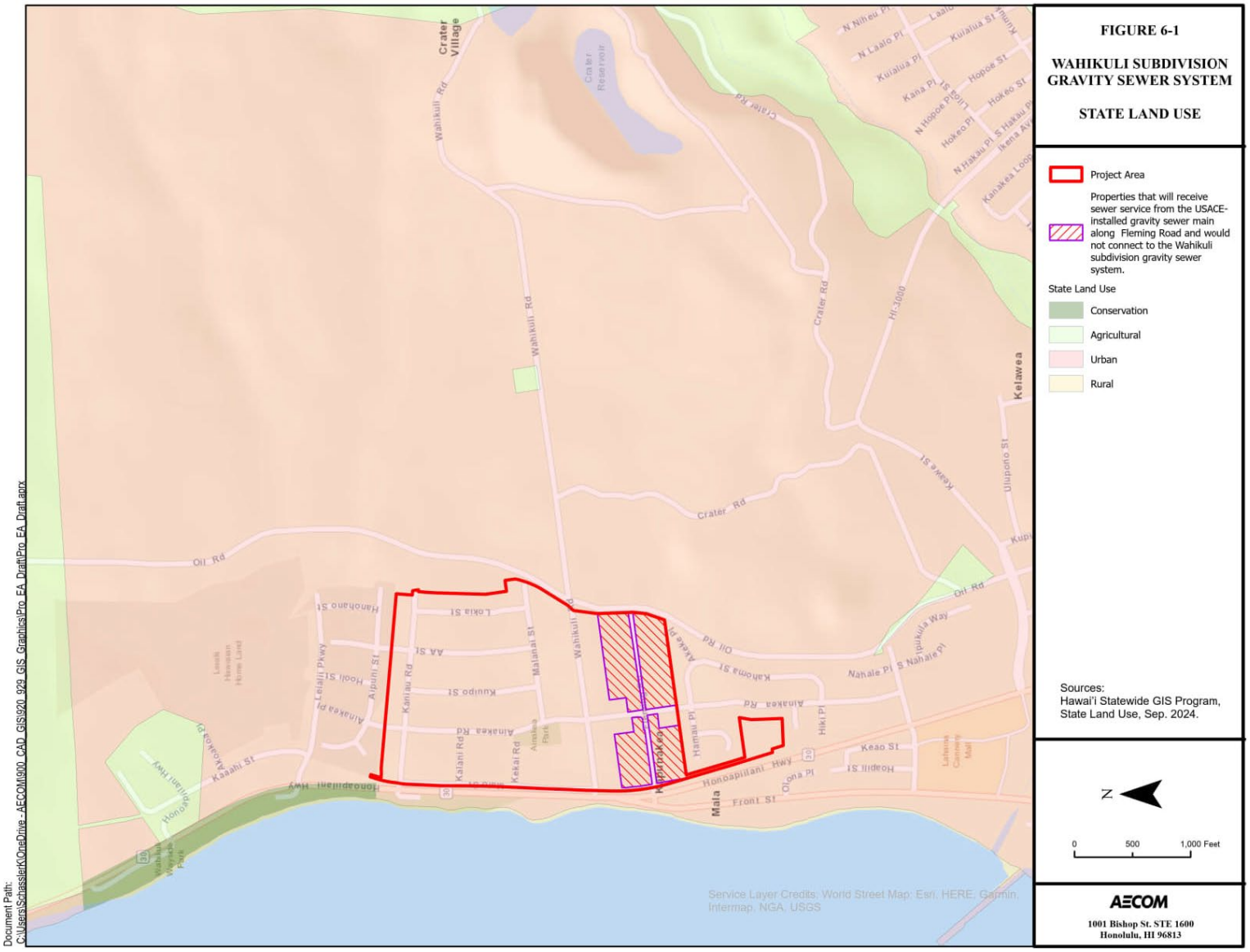

Figure 6-1. State Land Use

Table 6-9. State Plan, HRS Chapter 226: Population

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-5: Population			
*Objective: G*uide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.	C	N/C	N/A
Policies: To achieve the population objective, it shall be the policy of this State to:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.	X		
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.	X		
(3) Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.	X		
(4) Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.			X
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			X
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			X
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.			X
Discussion: The Proposed Action would create a more resilient wastewater management system, better equipped to withstand climate impacts and disasters. The proposed project aims to improve wastewater management to protect human health, nearshore waters, and corals reefs while minimizing the seepage of pollutants from the cesspools into Class A waters along Wahikuli Wayside Park. The Proposed Action would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values. Refer to **Section 2.2** for a more detailed discussion.			

Table 6-10. State Plan, HRS Chapter 226: Objectives and Policies for the Economy – In General

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-6: Objectives and policies for the economy – in general			
Objective: Planning for the State's economy in general shall be directed toward achievement of the following objectives:	C	N/C	N/A
(a) 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.	X		
(b) 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.			X

Policies: To achieve the general economic objectives, it shall be the policy of this State to:		
(1) Promote and encourage entrepreneurship within Hawai‘i by residents and nonresidents of the State.		X
(2) Expand Hawai‘i's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.		X
(3) Promote Hawai‘i as an attractive market for environmentally and socially sound investment activities that benefit Hawai‘i's people.		X
(4) Transform and maintain Hawai‘i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.		X
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawai‘i.		X
(6) Seek broader outlets for new or expanded Hawai‘i business investments.		X
(7) Expand existing markets and penetrate new markets for Hawai‘i's products and services.		X
(8) Assure that the basic economic needs of Hawai‘i's people are maintained in the event of disruptions in overseas transportation.		X
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	X	
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai‘i's small-scale producers, manufacturers, and distributors.		X
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.		X
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawai‘i.		X
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawai‘i's employment and economic growth opportunities.		X
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.		X
(15) Maintain acceptable working conditions and standards for Hawai‘i's workers.		X
(16) Provide equal employment opportunities for all segments of Hawai‘i's population through affirmative action and nondiscrimination measures.		X
(17) Stimulate 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.		X
(18) Encourage businesses that have favorable financial multiplier effects within Hawai‘i's economy, particularly with respect to emerging industries in science and technology.		X
(19) Promote and protect intangible resources in Hawai‘i, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	X	
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.		X
(21) Foster a business climate in Hawai‘i --including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.		X

Discussion: Action would create a more resilient wastewater management system, better equipped to withstand climate impacts and disasters. The proposed project aims to improve wastewater management to protect human health, nearshore waters, and corals reefs while minimizing the seepage of pollutants from the cesspools into Class A waters along Wahikuli Wayside Park. Minimizing the seepage of pollutants into Class A waters would help to protect surrounding ecosystems and prevent the degradation of the scenic and natural beauty of the area.

The Proposed Action would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values. This economic growth and recovery would, consequently, foster increased and diversified employment opportunities for residents within the area. Refer to **Section 2.2** for a more detailed discussion.

Table 6-11. State Plan, HRS Chapter 226: Objectives and Policies for the Economy – Federal Expenditures

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-9: Objectives and policies for the economy – federal expenditures			
Objective: 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.	C	N/C	N/A
Policies: To achieve the federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment;			X
(2) Promote Hawai'i's supportive role in national defense, in a manner consistent with Hawai'i's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawai'i's economy;			X
(3) Promote the development of federally supported activities in Hawai'i that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment;	X		
(4) Increase opportunities for entry and advancement of Hawai'i's people into federal government service;			X
(5) Promote federal use of local commodities, services, and facilities available in Hawai'i;			X
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawai'i; and			X
(7) Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			X
Discussion: The proposed project is being managed by the EPA, and project construction may be funded by both federal and State funds. The Proposed Action would help the State of Hawai'i and Maui County to meet statewide mandates by replacing cesspools and aid recovery efforts from the 2023 wildfires. As described in section 2.1.2, cesspools are a substandard sewage disposal method that are widely recognized as harmful to human health and the environment. Replacing these IWSs with a gravity sewer collection system would help to mitigate potential impacts to the environment and human health from non-point source groundwater pollution.			

Table 6-12. State Plan, HRS Chapter 226: Objectives and Policies for the Physical Environment – Land Based, Shoreline, and Marine Resources

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-11: Objectives and policies for the physical environment – land based, shoreline, and marine resources			
Objective: 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:	C	N/C	N/A
(a) Prudent use of Hawai'i's land-based, shoreline, and marine resources.			X
(b) Effective protection of Hawai'i's unique and fragile environmental resources.	X		
Policies: To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.	X		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	X		
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	X		
(4) Manage natural resources and environments to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.			X
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.	X		
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.	X		
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			X
(8) Pursue compatible relationships among activities, facilities, and natural resources.			X
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			X
Discussion: The Proposed Action would eliminate cesspools and replace the use of IWSs within the Wahikuli subdivision with a gravity sewer system that would be connected to the existing Lahaina sewer system and Lahaina Wastewater Reclamation Facility. The replacement of IWSs with a connected wastewater collection system would help to mitigate contamination from non-point source pollution into nearshore coastal waters and nearshore coral reefs.			

Table 6-13. State Plan, HRS Chapter 226: Objectives and Policies for the Physical Environment – Scenic, Natural Beauty, and Historic Resources

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-12: Objectives and policies for the physical environment – scenic, natural beauty, and historic resources			
Objective: 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.	C	N/C	N/A
Policies: To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.	X		

(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			X
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	X		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			X

Discussion: Much of Hawai'i's scenic and natural beauty is related to the flora such as native vegetation, forest habitat, and exceptional tree species. The proposed work would be within existing roadways and easements, as well as within an area of Lahaina that was heavily damaged by the 2023 wildfires. Thus, it is not anticipated that the Proposed Action would affect these resources. The Proposed Action would mitigate non-point source pollution from cesspools to nearshore coastal waters by replacing IWSs within the Project Area with a gravity sewer wastewater collection system. This would help to preserve significant coastal natural resources, such as nearshore coral reefs, and prevent the degradation of oceanic views. Although temporary viewshed impacts would arise as a result of construction, the pre-existing viewshed would be restored upon completion of the project.

Table 6-14. State Plan, HRS Chapter 226: Objectives and Policies for the Physical Environment – Land, Air, and Water Quality

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality			
Objective: Planning for the State's physical environment regarding land, air, and water quality shall be directed towards achievement of the following objective:	C	N/C	N/A
(a) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.	X		
(b) Greater public awareness and appreciation of Hawai'i's environmental resources.			X
Policies: To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			
(1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.			X
(2) Promote the proper management of Hawai'i's land and water resources.	X		
(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.	X		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.			X
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.	X		
(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.			X
(7) Encourage urban developments in close proximity to existing services and facilities.			X
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures and visitors.			X

Discussion: The Proposed Action would contribute to the improvement of groundwater and surface water quality. The pollutants in untreated wastewater from cesspools are released to the environment, discharged at depths below the ground surface that bypass the potential for natural remediation of wastewater contaminants. The Proposed Action supports minimizing contamination of water resources through connecting the Wahikuli subdivision to the Lahaina sewer system and Lahaina Wastewater Reclamation Facility and eliminating the use of IWSs.

Table 6-15. State Plan, HRS Chapter 226: Objectives and Policies for Facility Systems – In General

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-14: Objectives and policies for facility systems – in general			
Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, sustainable development, climate change adaptation, sea level rise adaptation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.	C	N/C	N/A
Policies: To achieve the general facility systems objective, it shall be the policy of this State to:			
(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	X		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	X		
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.	X		
(5) Identify existing and planned state facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards.			X
(6) Assess a range of options to mitigate the impacts of sea level rise to existing and planned state facilities.	X		
Discussion: The Proposed Action would enable the residents of the Wahikuli subdivision to connect to a sewer system and properly abandon their IWSs. Connecting the Wahikuli subdivision to the existing Lahaina sewer system and Lahaina Wastewater Reclamation Facility would provide residents with a cost effective and safe sewer disposal system, and create a more resilient wastewater management system, better equipped to withstand climate impacts and disasters. The planning and design of the gravity sewer system are supported by FEMA funds. Project construction may be funded by both federal and State funds.			

Table 6-16. State Plan, HRS Chapter 226: Objectives and Policies for Facility Systems – Solid and Liquid Wastes

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes			
Objective: Planning for the State's facility systems regarding solid and liquid wastes shall be directed towards the achievement of the following objectives:	C	N/C	N/A
(a) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	X		
(b) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.	X		

Policies: To achieve solid and liquid waste objectives, it shall be the policy of this State to:		
(1) Encourage the adequate development of sewerage facilities that complement planned growth.	X	
(2) Promote reuse and recycling to reduce solid and liquid wastes and employ a conservation ethic.	X	
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.		X
Discussion: The Proposed Action is an investment in wastewater infrastructure that would mitigate the risk to human health and the environment posed by current wastewater disposal methods. It would support meeting the State requirement to upgrade or convert to a septic or aerobic treatment unit or connect to a sewer system; thereby improving wastewater management and reducing the risk to human health. The new gravity sewer system would be connected to the Lahaina sewer system and Lahaina Wastewater Reclamation Facility, which would promote the treatment of the wastewater, and disposal or reuse of the treated effluent.		

Table 6-17. State Plan, HRS Chapter 226: Objectives and Policies for Facility Systems – Water

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-16: Objectives and policies for facility systems – water			
Objective: Planning for the State's facility systems regarding 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.	C	N/C	N/A
Policies: To achieve the facility systems water objective, it shall be the policy of this State to:			
(1) Coordinate development of land use activities with existing and potential water supply.			X
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			X
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.	X		
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			X
(5) Support water supply services to areas experiencing critical water problems.			X
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			X
Discussion: The Proposed Action would construct a wastewater sewer collection system, which would promote and encourage the reclamation and productive use of wastewater discharges.			

Table 6-18. State Plan, HRS Chapter 226: Objectives and Policies for Facility Systems – Housing

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-19: Objectives and policies for socio-cultural advancement – housing			
Objective: Planning for the State's socio-cultural advancement regarding housing shall be directed toward the achievement of the following objectives:	C	N/C	N/A

(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.	X	
(2) The orderly development of residential areas sensitive to community needs and other land uses.		X
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.		X
Policies: To achieve the housing objectives, it shall be the policy of this State to:		
(1) Effectively accommodate the housing needs of Hawai'i's people.		X
(2) Stimulate and promote feasible approaches that increase affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income households.		X
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.		X
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing rental and for sale housing units and residential areas.	X	
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.		X
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.		X
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.		X
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.		X

Discussion: The Proposed Action would construct a gravity sewer system for the Wahikuli subdivision and thereby would improve wastewater management for approximately 200 properties zoned for single-family use to protect human health and the environment. The replacement of IWSs with a gravity sewer system would help to mitigate potential negative impacts to human health and the environment, as well as support broader recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values.

Table 6-19. State Plan, HRS Chapter 226: Objectives and Policies for Facility Systems – Health

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-20: Objectives and policies for socio-cultural advancement – health			
Objective: Planning for the State's socio-cultural advancement regarding health shall be directed towards achievement of the following objectives:	C	N/C	N/A
(1) Fulfillment of basic individual health needs of the general public.			X
(2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.	X		
(3) Elimination of health disparities by identifying and addressing social determinants of health.			X
Policies: To achieve the health objectives, it shall be the policy of this State to:			

(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			X
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			X
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			X
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	X		
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			X
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code (U.S.C.) §11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			X
Discussion: The Proposed Action would reduce risk to human health by providing wastewater collection and treatment services to the Wahikuli subdivision. The current sanitary disposal method includes cesspools that release pollutants to the environment and pose a risk to human health. The Proposed Action would contribute to the improvement of groundwater and surface water quality.			

Table 6-20. State Plan, HRS Chapter 226: Sustainability

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-108 Sustainability			
Priority guidelines and principles to promote sustainability shall include:	C	N/C	N/A
(1) Encouraging balanced economic, social, community, and environmental priorities;	X		
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;	X		
(3) Promoting a diversified and dynamic economy;			X
(4) Encouraging respect for the host culture;			X
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;	X		
(6) Considering the principles of the ahupuaʻa system; and			X
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaiʻi.			X
Discussion: The Proposed Action would connect the single-family house lots of the Wahikuli subdivision to the Lahaina sewer system and Lahaina Wastewater Reclamation Facility through the use of a gravity sewer system. Connecting the lots to a wastewater reclamation facility would increase the treatment of wastewater, and safe disposal or reuse of the treated effluent. The reuse of treated effluent would promote sustainable water resource management in Hawaiʻi, an island state with very limited freshwater resources. The Proposed Action would mitigate			

potential impacts from non-point source pollution to surface and groundwater sources, and would improve the long-term health and quality of these resources for the use of current and future generations.

Table 6-21. State Plan, HRS Chapter 226: Climate Change Adaptation Priority Guidelines

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

HRS § 226-109 Climate Change Adaptation Priority Guidelines			
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 shall:	C	N/C	N/A
(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;			X
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			X
(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;			X
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			X
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;	X		
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;	X		
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;	X		
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;	X		
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.	X		
Discussion: The Proposed Action would help to preserve and protect nearshore coral reefs, which are a vital ecosystem that has the potential to mitigate the impacts of climate change. Current wastewater disposal systems within the Wahikuli subdivision include climactically vulnerable cesspools. The installation of a gravity sewer system would effectively integrate infrastructural climate policy by building a greater resilience to climate impacts and disasters through the elimination of wastewater disposal systems that can quickly overflow and contaminate groundwater when faced with the excessive flooding of soils.			

6.1.5 State Functional Plans

State Functional Plans provide the framework for implementation of the Hawai'i State Plan by establishing policies and guidelines for specific activities. State Functional Plans are developed by the agency responsible for the functional area, with public input. The 12 Functional Plan areas include agriculture, conservation lands, education, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation.

A review of the Functional Plans found one plan and related policies applicable to the Proposed Action. A discussion of the Proposed Action's consistency with the Health Functional Plan follows:

6.1.5.1 Health Functional Plan

Issue Area 5: Environmental Health and Protection

Policy: Air, Land and Water Quality Programs

Implementing Action: Develop and implement a Non-Point Source Pollution Program to Protect recreational and other surface waters.

Discussion: The State of Hawai'i has a Nonpoint Source Management Plan (NPS Plan) which is used to guide the State's NPS management efforts over a five-year period (2021-2025) by establishing goals, objectives, strategies, and milestone to reduce and prevent NPS pollution and improve water quality. The State of Hawai'i and the County of Maui has numerous mandates, goals, enforcements tools, permits, and monitoring procedures as a part of the NPS Plan. The Proposed Action would be in-line with the goals and policies of the NPS Plan, as it would reduce NPS pollution from septic systems and cesspools within the Wahikuli subdivision by replacing them with a gravity sewer septic system. The Proposed Action is consistent with applicable provisions of the Health Functional Plan.

6.1.6 Chapter 344, State Environmental Policy

The purpose of State Environmental Policy, Chapter 344 of the Hawai'i Revised Statutes, is to "establish a state policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawai'i."

The policy of this chapter is to 1) Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai'i; and 2) Enhance the quality of life by: … (D) Establishing a commitment on the part of each person to protect and enhance Hawai'i's environment and reduce the drain on nonrenewable resources.

Discussion: To conserve natural resources and enhance the quality of life, the State Environmental Policy sets forth guidelines that all agencies, in the development of programs, shall consider, insofar as practicable. The Proposed Action is consistent with these guidelines which include:

(2) Land, water, mineral, visual, air, and other natural resources

(A) Encourage management practices which conserve and fully utilize all natural resources;

(B) Promote irrigation and wastewater management practices which conserve and fully utilize vital water resources; and

(C) Promote recycling of wastewater.

The Proposed Action would result in the connection of house lots within the Wahikuli subdivision to a gravity sewer system, eliminating the need for IWSs. Eliminating the use of cesspools would result in the mitigation of non-point source pollution which reduces adverse impacts to the surrounding natural resources and the environment.

6.1.7 Hawai‘i 2050 Sustainability Plan

Act 8 of the Special Sessions Laws of Hawai‘i 2005 established the Hawai‘i Sustainability Task Force and directed the Task Force to develop a Hawai‘i 2050 Sustainability Plan to address the vital needs of Hawai‘i through the year 2050 and beyond. In 2019, Act 146, Session Laws of Hawai‘i 2019, codified as HRS §226-65 amended the scope of the Hawai‘i 2050 Sustainability Plan to serve as the State’s climate and sustainability strategic action plan. In 2020, the State officially established a Statewide Sustainability Program to provide statewide sustainability and climate adaptation planning and coordination.

The updated Hawai‘i 2050 Sustainability Plan was published in 2021 by the State Office of Planning and Sustainable Development and serves as a State climate and sustainability strategic action plan, pursuant to HRS §226-65. The plan includes specific priority strategies and actions to advance economic, social and environmental sustainability, and climate resilience in Hawai‘i over the next decade. Statewide efforts in relation to the United Nations’ Sustainable Development Goals (SDGs) and current commitments to coordinate and implement the sustainability and climate adaptation goals, principles, and policies are outlined in the plan (State of Hawai‘i OPSD 2021).

The United Nations designated 2020-2030 as the “Decade of Action”, a time to accelerate progress towards SDGs. The Hawai‘i 2050 Sustainability Plan identifies 8 focus areas with 38 strategies and more than 250 recommended actions to help Hawai‘i become more equitable, climate resilient and sustainable during the “Decade of Action”. Based on public and stakeholder engagement, the focus areas are defined as follows:

- Promote a Sustainable Economic Recovery;
- Reduce Greenhouse Gas Emissions;
- Improve Climate Resilience;
- Advance Sustainable Communities;
- Advance Equity;
- Institutionalize Sustainability Throughout Government;
- Preserve the Natural Environment; and
- Perpetuate Traditional Ecological Knowledge and Values.

Discussion: Hawai‘i 2050 recognizes that preserving the natural environment through reducing pollution and dumping improves water quality. The Proposed Action conforms to multiple strategies and actions discussed through the plan, including:

6.1.7.1 Strategy 19: Implement actions that improve the state’s resilience to climate change

Applicable Actions:

- Seek federal funding to increase the resilience of Hawai‘i’s infrastructure and other assets (through implementation of strategies to protect, accommodate, and/or relocate).

Discussion:

- The construction of a gravity sewer system in the Wahikuli subdivision would create a more resilient wastewater management system, better equipped to withstand climate impacts and disasters. The proposed project is being managed by the EPA, and project construction may be funded by both federal and State funds.

6.1.7.2 Strategy 31: Improve water quality through reduced pollution and dumping

Applicable Actions:

- Work toward the 2050 cesspool reduction requirement and develop infrastructure to support the elimination of cesspools.

Discussion:

- The Proposed Action would enable the residents of the Wahikuli subdivision to connect to a sewer system and properly abandon their IWSs. Implementing the proposed gravity sewer system would facilitate compliance with Act 125 of 2017, as amended by Act 87 of 2022, which requires that by January 1, 2050 all cesspools in the State, unless granted exemption, shall upgrade or convert to a wastewater system approved by the State of Hawai'i DOH, or connect to a sewer system.

6.1.7.3 Strategy 35: Protect and manage watersheds

Applicable Actions:

- Continue to implement non-point source water pollution management strategies to restore impaired waters and protect high quality waters from non-point source pollution.

Discussion:

- The construction of a gravity sewer system in the Wahikuli subdivision would create a more resilient wastewater management system. The proposed project aims to improve wastewater management to protect nearshore waters and coral reefs while minimizing the seepage of pollutants from the cesspools into the Class A waters along Wahikuli Wayside Park.

6.2 County Land Use Plans and Policies

6.2.1 County of Maui General Plan

The new General Plan for the County of Maui was adopted in March 2010 to address significant changes that Maui County has experienced since the previous General Plan was approved in 1991 including economic, demographic, social, and physical changes. The Countywide Policy Plan provided the policy framework needed for the development of the Maui Island Plan and the nine Community Plans, which are further discussed in sections 1.2.2 and 1.2.3 below.

The Countywide Policy Plan provides broad goals, objectives, policies, and implementing actions that portray the desired direction of the County of Maui's future (County of Maui 2010). These include:

1. A vision statement and core values for the County to the year 2030
2. An explanation of the plan making process
3. A description and background information regarding Maui County today
4. Identification of guiding principles
5. A list of countywide goals, objectives, policies, and implementing actions related to the core themes:
    a. Protect the Natural Environment
    b. Preserve Local Cultures and Traditions
    c. Improve Education
    d. Strengthen Social and Healthcare Services
    e. Expand Housing Opportunities for Residents

f. Strengthen the Local Economy

g. Improve Parks and Public Facilities

h. Diversify Transportation Options

i. Improve Physical Infrastructure

j. Promote Sustainable Land Use and Growth Management

k. Strive for Good Governance

Of these, the core themes that are applicable to the Proposed Action are:

- Section A. Protect the Natural Environment;
- Section F. Strengthen the Local Economy; and
- Section I. Improve Physical Infrastructure.

The objectives and policies that were omitted from discussion within the sections below were deemed to be either not applicable or not relevant to this project.

6.2.1.1 Section A. Protect the Natural Environment

Goal:

Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.

Objective (2):

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

Policies:

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

Discussion:

The Proposed Action would result in the connection of house lots within the Wahikuli subdivision to a gravity sewer system, eliminating the need for IWSs. Eliminating the use of cesspools would result in the mitigation of non-point source pollution entering into nearshore coastal waters.

Objective (3):

Improve the stewardship of the natural environment

Policies:

(b) Improve communication, coordination, and collaboration among government agencies, nonprofit organizations, communities, individuals, and landowners that work for the protection of the natural environment.

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

(d) Improve efforts to mitigate and plan for the impact of natural disasters, human influenced emergencies, and global warming.

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

Discussion:

The Proposed Action would help to mitigate non-point source pollution from seeping into surrounding soils and seepage of non-point source pollutants into nearshore coastal waters. As a joint federal and County undertaking, and through the stakeholder and public engagement process, the planning, design, and implementation of the project entails a collaboration of various organizations, including federal, State, and County government agencies, as well as local community groups and landowners. The collaboration and coordination of multiple sectors of government and community organizations aids in improving the protection of the natural environment of Lahaina. The Proposed Action would eliminate the need for IWSs and would improve the resilience of the area against potential flooding disasters.

6.2.1.2 Section F. Strengthen the Local Economy

Goal:

Maui County's economy will be diverse, sustainable, and supportive of community values.

Objective 1:

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

Policies:

(j) Support efforts to improve conditions that foster economic vitality in our historic small towns.

Discussion:

The Proposed Action would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values.

Objective 2:

Diversify and expand sustainable forms of agriculture and aquaculture.

Policies:

(e) Support ordinances, programs, and policies that keep agricultural land and water available and affordable to farmers.

Discussion:

The Proposed Action would connect the Wahikuli subdivision to a new gravity sewer collection system. The collected wastewater would flow via the existing Lahaina sewer system to the Lahaina Wastewater Reclamation Facility, where it would be treated either for disposal or to meet R-1 water standards based on the reuse guidelines of the Hawai'i State Department of Health. Currently, the Lahaina facility sends most of its treated water to underground injection wells in West Maui. However, connecting the Wahikuli subdivision to the existing wastewater collection system would increase the amount of reclaimed wastewater potentially available for reuse providing there is sufficient demand for R-1 water reuse.

6.2.1.3 Section I. Improve Physical Infrastructure

Goal:

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.

Objective 2:

Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible.

Policies:

(b) Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste.

(e) Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans in the County's Capital Improvement Program.

Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. The Proposed Action would connect the single-family house lots of the subdivision to the existing Lahaina sewer system, and collected wastewater would be conveyed to the Lahaina Wastewater Reclamation Facility. The wastewater conveyed to the reclamation facility is treated and disposed of by underground injection or further treated for reuse. Wastewater system upgrades from the Proposed Action would be consistent with current and future plans under the Maui County Capital Improvement Program, which seeks to invest more into sewer rehabilitation in West Maui to further protect the environment and comply with EPA and State standards.

Objective 4:

Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity.

Policies:

(e) Support catchment systems and on-site wastewater treatment in rural areas and aggregated water and wastewater systems in urban areas if they are appropriately located

Discussion:

Despite being located within close proximity to an existing sewer collection system and wastewater treatment infrastructure, residents within the Wahikuli subdivision rely on IWSs for wastewater treatment and disposal. The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. The new gravity sewer system would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system and collected wastewater would be conveyed to the Lahaina Wastewater Reclamation Facility.

Objective 5:

Improve the planning and management of infrastructure systems.

Policies:

(g) Ensure that infrastructure is built concurrent with or prior to development.

(h) Ensure that basic infrastructure needs can be met during a disaster.

(j) Promote the undergrounding of utility and other distribution lines for health, safety, and aesthetic reasons.

Discussion:

The Proposed Action involves designing and constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. Housing within the

subdivision is currently being redeveloped after damage was sustained during the 2023 wildfire. Additional housing will likely be constructed prior to the start of any proposed project activity. Therefore, construction of the Proposed Action would take place both concurrently with and prior to the redevelopment of housing within the Wahikuli subdivision.

The sewer lines for the new gravity sewer system would be constructed underground, causing only temporary impacts to the subdivision. The Proposed Action would help to ensure that residents have access to a reliable wastewater disposal system during disasters and would eliminate the need for IWSs, which are more vulnerable to flooding.

6.2.2 Maui Island Plan

The Maui Island Plan (MIP), adopted in December 2012, is a blueprint that provides direction for future growth, the economy, and social and environmental decisions on the island through 2030. The MIP looks comprehensively at many factors that influence the physical, social, and economic development of the island and establishes a Directed Growth Strategy, which identifies areas appropriate for future urbanization and revitalization.

The format of the MIP is based on best practices in preparing comprehensive plans. The MIP is divided into chapters addressing the requirements of Chapter 2.80B. Each chapter provides a summary of pertinent background information regarding trends and forecasts and identifies significant regional challenges and opportunities. The MIP incorporates input from people across the island through a series of community meetings held over several years and establishes a vision, founded on core values that break down into chapters. Each chapter contains a series of goals, objectives, policies, and actions. These chapters include:

1. Population
2. Heritage Resources
3. Natural Hazards
4. Economic Development
5. Housing
6. Infrastructure and Public Facilities
7. Land Use
8. Directed Growth Plan
9. Monitoring and Evaluation

Similar to the County of Maui General Plan, only a select number of the chapters identified above are applicable to the Proposed Action. Applicable chapters include:

- Chapter 2. Heritage Resources;
- Chapter 3. Natural Hazards; and
- Chapter 6. Infrastructure and Public Facilities.

The sub-sections, objectives, and policies from each chapter that were not included were deemed to be either not applicable or not relevant to this project.

6.2.2.1 Chapter 2. Heritage Resources

6.2.2.1.1 Section 2.2 Shoreline, Reefs, & Nearshore Waters

The Island of Maui's comprehensive coastal zone managements and regulatory framework is designed to protect the shoreline and abutting waters. However, human activities contributing to non-point source pollution, shoreline hardening, increasing development, and lack of beach access are among the major threats to the integrity and the public's use of the island's beaches and coastal waters. Select objectives and policies within Section 2.2 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur as a result of the Proposed Action.

Goal:

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

Objective 2.2.2:

Improve reef health, coastal water quality, and marine life.

Policies:

(a) Create additional mechanisms where needed to contain and control runoff and pollution.

Discussion:

The Proposed Action would connect single-family house lots in the Wahikuli subdivision to a gravity sewer system, eliminating the need for IWSs. This change would mitigate non-point source pollution from cesspools entering nearshore coastal waters, thereby protecting the health of coral reefs and marine life.

Objective 2.2.3:

Water quality that meets or exceeds State Clean Water Act Standards

Policies:

(e) Phase out cesspools and restrict the use of septic systems in ecologically sensitive coastal areas by converting to environmentally friendly alternative sewage treatment systems and connecting to central sewage systems when and where feasible.

Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, eliminating the use of septic systems and cesspools for the disposal of wastewater. The Proposed Action would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system, and collected wastewater would be sent to the Lahaina Wastewater Reclamation Facility. This change would mitigate non-point source pollution from cesspools entering nearshore coastal waters.

6.2.2.1.2 Section 2.3 Watersheds, Streams, and Wetlands

Maui consists of two large-scale watersheds: East Maui and West Maui. Maui's watersheds are a mix of streams, gulches, aquifers, and rivers varying in size, flow, and connectivity. Maui's nearshore waters and marine life are dependent on functioning watersheds. Without healthy watersheds as a buffer, soil and sediment can erode and flow into nearshore coral reefs and ocean waters. Some of the major watershed, stream, and wetland issues facing Maui include watershed pollution from point and nonpoint sources, absence of a comprehensive and integrated approach to watershed management, and inappropriate development near and around sensitive habitats that support native, endangered and endemic species habitat. Select objectives and policies within Section 2.3 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur as a result of the Proposed Action.

Goal:

Healthy watersheds, streams, and riparian environments.

Objective 2.3.2:

Decreased non-point source (NPS) and point source pollution.

Policies:

(a) Enforce water pollution related standards and codes.

Discussion:

The Proposed Action would result in the connection of house lots within the Wahikuli subdivision to a gravity sewer system, eliminating the use of septic systems and cesspools. Eliminating IWSs would mitigate non-point source pollution entering nearshore coastal waters. The Proposed Action would help Maui County further protect its watersheds, streams, and riparian environments from non-point source pollution, and increase compliance with federal, State, and County standards and codes.

6.2.2.1.3 Section 2.5 Scenic Resources

The island's dramatic viewshed and scenic horizons are part of what makes Maui a desirable place to live. Scenic views are closely tied to residents' quality of life and the island's sense of place. Maui possesses unique, rare, and significant views, many of which have no equal. Many views and landscapes are closely tied to Hawaiian culture, folklore, and history. Maui's spectacular views are also a driving force behind the island's thriving visitor industry. Thus, scenic resource preservation is an important part of protecting the health of Maui's economy. Select objectives and policies within Section 2.5 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur as a result of the Proposed Action.

Goal:

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

Objective 2.5.2:

Reduce impacts of development projects and public-utility improvements on scenic resources

Policies:

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

Discussion:

The Proposed Action involves designing and constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. The sewer lines for the system would be constructed underground, causing only temporary impacts to any scenic resources within the area.

6.2.2.2 Chapter 3. Natural Hazards

Natural hazards must be considered for future planning. Maui's shorelines, beaches, and nearshore coastal waters are highly susceptible to damage from coastal hazards such as tsunamis, storm surge, and erosion. Inland areas can sustain wind damage, flooding, fires, and drought. These dangers pose a significant threat to life and property. Mitigation, risk, and vulnerability should be addressed for hazards when planning for the long term.

To be prepared for any hazard event, all relevant agencies have to be communicative and coordinated; this will help to ensure community resilience, before, during, and after a hazard event. Communities can create more resilience to natural hazards by building the capacity to avoid or minimize the impacts of hazards and rebound quickly from disaster. Select objectives and policies within Section 3 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur because of the Proposed Action.

Goal:

Maui will be disaster resilient.

Objective 3.1.2:

Greater protection of life and property.

Policies:

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

Discussion:

The Proposed Action involves designing and constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. It would provide the residents of the subdivision access to a reliable wastewater disposal system during disasters by eliminating the need for IWSs, which are more vulnerable to flooding. Installing the gravity sewer system underground would increase the resilience of the sewer system to natural hazards.

6.2.2.3 Chapter 6. Infrastructure and Public Facilities

6.2.2.3.1 Section 6.2 Wastewater

The Maui County Code defines wastewater as “water-carried wastes from dwellings, commercial establishments, institutions, and industrial plants, and may include groundwater, surface water, and stormwater not intentionally admitted.” Management of wastewater is important to Maui because it helps guard the water supply from becoming contaminated, protects the public health and environment, and aids in water conservation by allowing reclaimed water to be used for non-potable water purposes. Proper disposal of the millions of gallons of wastewater produce on Maui protects the drinking water supply, coastal water quality, and other important environmental resources.

Select objectives and policies within Section 6.2 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur because of the Proposed Action.

Goal:

Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.

Objective 6.2.2:

Adequate levels of wastewater service with minimal environmental impacts.

Policies:

(a) Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.

(g) Strongly encourage the phase out of cesspools.

Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. It would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system and collected wastewater would be sent to the Lahaina Wastewater Reclamation Facility. The project would be consistent with State and federal standards that regulate wastewater disposal or reuse and would help to phase-out the use of cesspools, which is required under Hawai‘i State Legislature Act 125.

Objective 6.2.3:

Increase the reuse of wastewater.

Policies:

(b) Expand the reuse of wastewater from Central Maui, Kīhei, Lahaina, and other wastewater systems.
Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. It would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system, and collected wastewater would be sent to the Lahaina Wastewater Reclamation Facility. Although connecting the Wahikuli subdivision to the existing Lahaina sewer system and reclamation facility would not expand the reuse of wastewater on the Island of Maui, it would increase the amount of reclaimed wastewater potentially available for reuse providing there is sufficient demand for R-1 water.

6.2.2.3.2 Section 6.3 Water

Water-resource planning is critical to ensure public health, economic development, and environmental protection. This involves continual assessment of the current and future adequacy of water supplies in a holistic way, including the establishment of appropriate principles and standards. The process looks ahead to what the subject area would be like, how much water would be needed, where such water would come from, and what the water quality should be. Equally important is determining the capital improvements that would be required to treat and deliver the needed water, and the best ways to pay for these improvements.

Select objectives and policies within Section 6.3 of the *Maui Island Plan, General Plan 2030* (County of Maui Planning Department 2012) are applicable to the activities and outcomes that would occur because of the Proposed Action.

Goal:

Maui will have an environmentally sustainable, reliable, safe, and efficient water system.

Objective 6.3.2:

Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island’s water needs.

Policies:

(c) Maximize the efficient use of reclaimed wastewater to serve non-potable needs.

Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. The Proposed Action would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system, and collected wastewater would be sent to the Lahaina Wastewater Reclamation Facility. Connecting the Wahikuli subdivision to the existing Lahaina sewer system and reclamation facility would increase the

amount of reclaimed wastewater potentially available for reuse provided there is sufficient demand for R-1 water.

6.2.3 West Maui Community Plan

The West Maui County Plan (WMCP) is one of the nine community plans that were created to provide recommendations concerning land use, density and design, transportation, community facilities, infrastructure, visitor accommodations, commercial and residential areas, and other matters related to development that are specific to the region of the plan. As a part of the General Plan for Maui County, the WMCP aligns under the 2010 Countywide Policy Plan and the 2012 Maui Island Plan (MIP) within the County's hierarchical planning structure.

The WMCP Area covers the majority of the traditional moku of Lahaina and Kāʻanapali. It aligns with the Lahaina Judicial District located on the western slopes and coastal plains of West Maui. Its common boundary with the Wailuku Judicial District begins at the southern shore of West Maui about 3/4 of a mile west of Papawai Point. Beginning at this point, the boundary runs mauka along the centerline of Manawainui Gulch to the ridgeline from Hanaʻula to Kahoʻolema. The boundary then continues along the ridgeline in a northerly direction to ʻEke Crater and then due north along Poʻelua Gulch to the northern shoreline of West Maui.

The WMCP provides a growth framework, goals, policies, and actions to address challenges and opportunities, and support the community's vision. The Plan directs future growth and development in West Maui over a 20-year timeframe. As established under Chapter 2.80B of the Maui County Code, the WMCP outlines the community's vision for its future and the road map to achieve its vision.

The goals, policies, and actions provided in this WMCP will direct the County in its planning, programs, and decision making. The policies and actions outlined in this plan direct the County's decisions related to managing land use, review of development projects, changes to zoning and development regulations, prioritizing funding for projects, and establishing new programs and initiatives.

The WMCP is divided into four separate content sections; Section 1 Plan Framework, Section 2 Policy Framework, Section 3 Growth Framework, and Section 4 Implementation and Monitoring. The WMCP places great emphasis on the interconnectedness of the natural and human-made systems, structures, and services that make West Maui a community and are vital for planning for the future. The Policy Framework section of the WMCP is organized by goals, which are intentions that provide more detail than the community's vision. Numerous topics are covered within each goal and its policies and actions, highlighting the interdependent nature of planning. These goals include:

1. Ready and resilient systems
2. A complete, balanced, and connected transportation network
3. Responsible stewardship of resources, culture, and character
4. Economic opportunity through innovation and collaboration
5. Safe, healthy, livable communities for all

As in previous County of Maui plan sections, only a select number of the goals identified above contain policies that are applicable to the Proposed Action. Applicable goals include:

- Goal 2.1: Ready and resilient systems;
- Goal 2.3: Responsible stewardship of resources, culture, and character; and
- Goal 2.5: Safe, healthy, livable communities for all.

6.2.3.1 Policy Framework

6.2.3.1.1 Goal 2.1: Ready and resilient systems

Goal:

West Maui is committed to supporting improved infrastructure systems for an adaptive and resilient community that meets the needs of residents and fosters responsible stewardship of West Maui's infrastructure systems.

Policies:

Climate Change and Sea Level Rise:

4. Prioritize projects that provide multiple benefits from resilience actions

Discussion:

In addition to enhancing resilience to natural hazards such as flooding, the Proposed Action would provide residents with a reliable sewer system; mitigate potential non-point source pollutants seeping into groundwater aquifers and nearshore coastal waters; and increase the amount of reclaimed wastewater potentially available for reuse providing there is sufficient demand for R-1 water. The Proposed Action would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values.

Fire and Emergency Management:

6. Support the goals, objectives, and actions of the West Maui Community Wildfire Protection Plan and the Maui County Multi-Hazard Mitigation Plan.

Discussion:

The Proposed Action would be consistent where applicable with the goals, objectives, and actions outlined in the West Maui Community Wildfire Protection Plan and the Maui County Multi-Hazard Mitigation Plan.

Wastewater:

12. New developments in West Maui, including projects developed under Chapter 201H, Hawai'i Revise Statutes, Chapters 2.96 and 2.97, Maui County Code, must connect to County or private recycled water distribution systems when available; if reuse is not readily available, developments must be designed to allow for future connections.

Discussion:

The Proposed Action involves constructing a new gravity sewer system for the Wahikuli subdivision, which uses septic systems and cesspools for the disposal of wastewater. The Proposed Action would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system, and collected wastewater would be conveyed to the Lahaina Wastewater Reclamation Facility.

6.2.3.1.2 Goal 2.3: Responsible stewardship of resources, culture, and character

Goal:

The West Maui community is committed to preserving and caring for historic, cultural, and natural resources.

Policies:

(g) All development must implement recommendations of the Maui County Planting Plan for street and parking area trees, encouraging the use of native and endemic plants. Plants that are on the Hawai'i Pacific Weed Risk Assessment list must not be used.

13. The marine and nearshore environment and open space areas are important assets of the region and should be protected and preserved. Habitat connectivity for threatened and endangered species, watersheds, undeveloped shorelines areas and other environmentally sensitive lands must be preserved.
14. Reuse of treated effluent and the reduction of sedimentation of near shore waters shall be pursued to protect and enhance the regions land, water, and marine environments.
2. All development projects must engage in consultation with the Aha Moku ʻo Maui representative associated with the project area – either Moku ʻo Lahaina or Moku ʻo Kāʻanapali – and provide evidence of this engagement to the department.

Discussion:

The Proposed Action would connect the single-family house lots of the Wahikuli subdivision to the existing Lahaina sewer system by installing a gravity sewer system, and collected wastewater would be sent to the Lahaina Wastewater Reclamation Facility. Connecting the Wahikuli subdivision to the existing Lahaina sewer system and reclamation facility would increase the amount of reclaimed wastewater potentially available for reuse providing there is sufficient demand for R-1 water. The Proposed Action would also protect marine and nearshore environments by eliminating the need for IWSs within the Wahikuli subdivision, thereby mitigating non-point source pollutants that could seep into nearshore coastal waters.

The Aha Moku ʻo Maui representative associated with the Project Area, Moku ʻo Lahaina, has been notified of the project and will be consulted throughout the course of the project regarding any information relevant to the Aha Moku system and the Aha Moku ʻo Maui.

6.2.3.1.3 Goal 2.5: Safe, healthy, livable communities for all

Goal:

West Maui is committed to creating and supporting places that are resilient to hazards, meet the daily needs of residents, provide opportunities to live a healthy lifestyle with easy access to fresh food and fresh air, include a variety of affordable housing options near jobs, and provide safe routes to and from home.

Policies:

20. Promote the placement of utilities underground in new areas of development and in existing areas, where possible, unless desecration of iwi kūpuna is likely to occur or if the development lies within areas of significant cultural resources in the proposed cultural overlay, a permit will be required.

Discussion:

The Proposed Action would construct a new gravity sewer system for the Wahikuli subdivision. The sewer for the system would be constructed underground and would only result in temporary impacts to the area. If *iwi kūpuna* (ancestral remains) were to be encountered during excavation or construction work, work would be immediately stopped, and the appropriate authorities would be contacted to properly handle the discovery and ensure respectful treatment of the remains.

6.2.3.2 Growth Framework

The primary objective of the growth plan is to provide enough land to accommodate the Growth West Maui is expected to experience during the 20-year planning period, while protecting the resources, culture and character that make West Maui a special place to live, work, and play.

By 2040, the population of West Maui is expected to grow approximately 8,754 new residents based upon the 2022 existing population. The Growth Framework section in the West Maui Community Plan will assist in helping decision makers and agencies plan for the land uses, services, and infrastructure that West Maui needs now and in the future. The Growth Framework forms the foundation for land use and development decisions and provides guidance for efforts to update and create new regulations, like the zoning code.

The Growth Framework section includes a zoning map, similar to that used by Maui County, that uses 15 land use designations to implement its vision and goals. The Proposed Action Project Area is located within Subarea 3 of the West Maui Community Plan Land Use Designation Map, which is attached in **Appendix D**. The Project Area crosses into three different zones of West Maui land use designations, including Residential (RES), Park (PK), and Public/Quasi-Public (PQP).

Each of these zones are designated as such to provide the West Maui community with protection against improper land use. The Residential (RES) community plan designation is intended to establish, protect, and appropriately infill low-to-moderate-density residential areas. The Park (PK) community plan designation is intended to preserve and manage lands for recreational activities. The Public/Quasi-Public (PQP) community plan designation is intended to provide facilities for public use or benefit.

While the land use of all three of these zones would be temporarily affected by construction resulting from the Proposed Action, pre-existing land use would be restored upon completion of the project. There are no applicable policies within the Growth Framework section that relate to the Proposed Action or the Project Area of northern Lahaina.

6.2.4 County of Maui Special Management Area

Per the Federal Coastal Zone Management Act of 1972, Hawai‘i’s CZM Program outlines objectives and policies to guide the use of the State’s coastal resources. The entire State of Hawai‘i is included in the CZM Program Area.

As codified in HRS Chapter 205A, each country in the State of Hawai‘i provides its own laws and regulations to implement the CZM Program within its respective jurisdiction through the Special Management Area (SMA) process. Portions of the area of the Proposed Action are located with the County-delineated SMA as designated in HRS Chapter 205A (**Figure 6-2**).

The County of Maui Department of Planning Maui Planning Commission, Chapter 202 contains regulations that apply to all lands on the Island of Maui within the SMA. Projects that take place within the SMA may potentially need to submit an SMA Assessment. An SMA Assessment is used to regulate any use, activity or operation that qualifies as a "Development." The assessment provides a means to preserve, protect, and where possible, restore the natural resources of the coastal zone of Hawai‘i by establishing special controls on development within the area along the shoreline. The objectives and policies if this chapter are contained in HRS § 205A-2, which are included in **Section 1.1.2** of this EA. The SMA guidelines set forth in Section 205A-26 and are used for the review of developments proposed in the SMA. A discussion of consistency with these guidelines is included in **Table 6-22**.

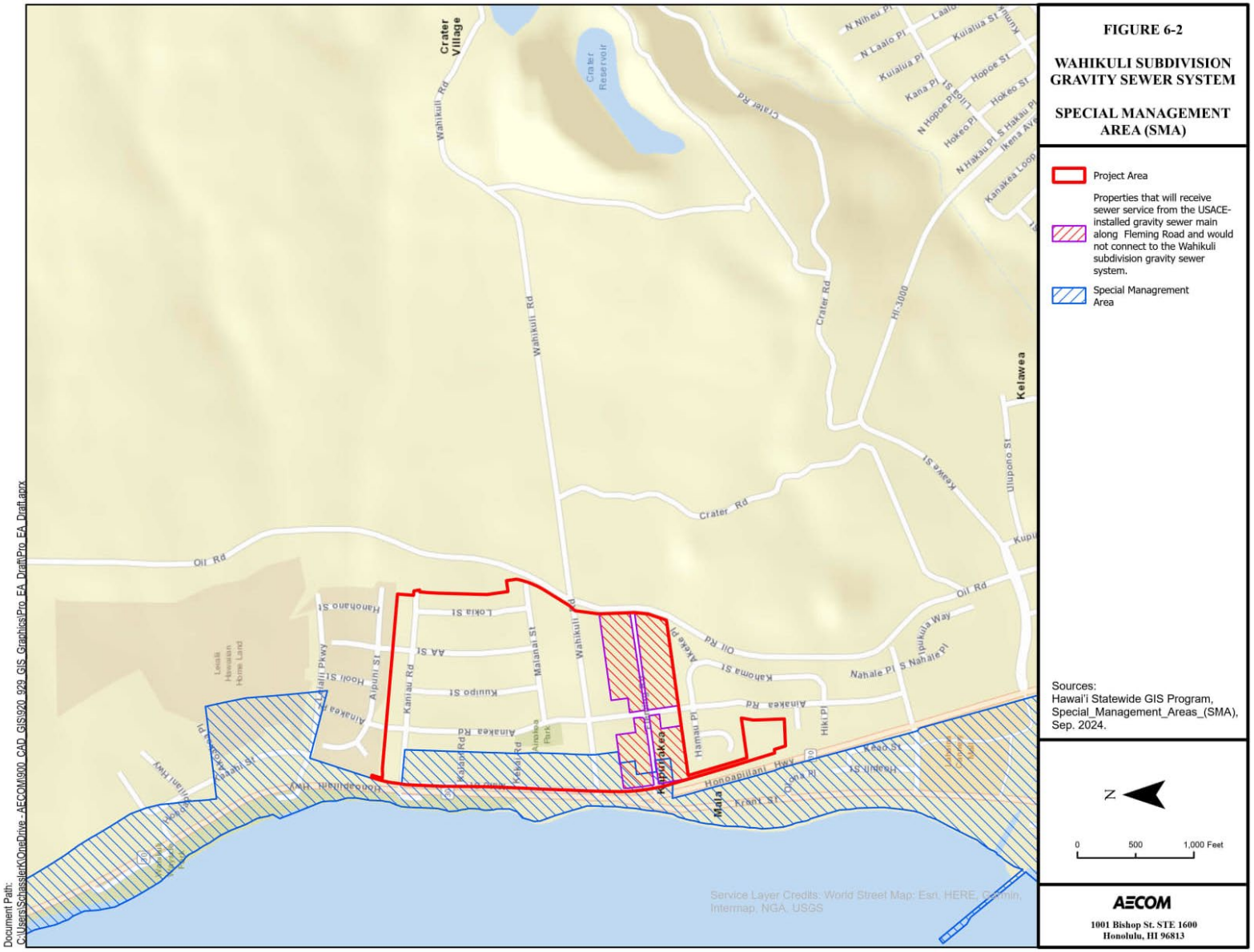

Figure 6-2. Special Management Area (SMA)

Table 6-22. Special Management Area, HRS Chapter 205A-26

C=Consistent; N/C=Not Consistent; N/A=Not Applicable

Review Guidelines (1) All development within the special management area shall be subject to reasonable terms and conditions set by the council to ensure	C	N/C	N/A
Policies: To achieve the population objective, it shall be the policy of this State to:			
(A) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles;	X		
(B) Adequate and properly located public recreation areas and wildlife preserves are reserved;			X
(C) Provisions are made for solid and liquid waste treatment, disposition, and management that will minimize adverse effects upon special management area resources; and	X		
(D) Alterations to existing landforms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources, beaches, coastal dunes, and scenic and recreational amenities and minimize impacts from floods, wind damage, storm surge, landslides, erosion, sea level rise, siltation, or failure in the event of earthquake.			X
Review Guidelines (2) No development shall be approved unless the council has first found that:			
(A) That the development will not have any significant adverse environmental or ecological effect, except as any adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interests. Those adverse effects shall include but not be limited to the potential cumulative impact of individual developments, each of which taken by itself might not have a significant adverse effect, and the elimination of planning options;	X		
(B) That the development is consistent with the objectives, policies, and special management area guidelines of this chapter and any guidelines enacted by the legislature; and	X		
(C) That the development is consistent with the county general plan, community plan, and zoning; provided that a finding of consistency shall not preclude concurrent processing where a general plan, community plan, or zoning amendment may also be required.	X		
Review Guidelines (3) The authority shall seek to minimize, where reasonable:			
(A) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;			X
(B) Any development that would reduce the size of any beach or other area usable for public recreation;			X
(C) Any development that would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management areas and the mean high tide line where there is no beach;			X
(D) Any development that would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and			X
(E) Any development that would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.			X

Discussion: The Proposed Action would improve wastewater collection and management and result in the mitigation of potential impacts of septic systems and cesspools on special management area resources. The Proposed Action's consistency with the Maui County General Plan, community plans, development plans, and zoning is discussed throughout **Section 6.2**. The project and all associated activity would be consistent with the objectives, policies, and special management area guidelines and any potential adverse environmental or ecological effects would be mitigated to the maximum extent practicable.

Although construction of the Proposed Action would take place near the Wahikuli Wayside Park beach, there would be no impact to the public's ability to access the beach.

6.2.5 County of Maui Zoning

Land uses within the jurisdiction of the County of Maui are regulated under Title 19, Zoning of the Code of the County of Maui, Hawai'i. The purpose and intent of the Zoning Code is to:

- Regulate the utilization of land in a manner encouraging orderly development in accordance with the land use directives of the Hawai'i Revised Statutes, the revised charter of the County of Maui (1983), as amended, and the general plan and the community plans of the County.

1) Promote and protect the health, safety, and welfare of the people of the County by:
   a) Guiding, controlling, and regulating future growth and development in accordance with the general plan and community plans of the County.
   b) Regulating the location and use of buildings and land adjacent to streets and thoroughfares to lessen the danger and inconvenience to the public caused by undue interference with existing or prospective traffic movements on streets and thoroughfares.
   - Regulating the location, use, or design of sites and structures to minimize adverse effects on surrounding uses, prevent undue concentrations of people, provide for adequate air, light, privacy, and the convenience of access to property, and secure the safety of the public from fire and other dangers.
   c) Encouraging designs that enhance the physical form of the various communities of the County
   d) Stabilizing the value of property.
   e) Encouraging economic development which provides desirable employment and enlarges the tax base.
   f) Promoting the protection of historic areas, cultural resources, and the natural environment.
   g) Encouraging the timeliness of development in conjunction with the provision of public services which include, but are not limited to, police, fire, flood protection, transportation, water, sewerage, drainage, schools, recreational facilities, health facilities, and airports.
2) Provide reasonable development standards which implement the community plans of the County. These standards include, but are not limited to, the location, height, density, massing, size, off-street parking, yard area, open space, density of population, and use of buildings, structures, and lands to be utilized for agricultural, industrial, commercial, residential, or any other purpose.

   There are 21 distinct zoning districts within the county of Maui, as well as five overlay zone districts. The Proposed Action is located primarily within the R3 Residential district, but a small section of the Project Area just to the north of Kaniau Road is located within the AG Agriculture district. **Table 6-23** provides a summary of certain applicable regulations. Plan approval is required for the Proposed Action.

Table 6-23. Summary of Zoning District Regulations

District	Proposed Action (Use) Permitted	Height	Minimum Building Site Size
Residential (R3)	Permitted	2 stories, or 30 ft	Area - 10,000 sq ft Width – 70 ft Yard Setback – 15 ft (front), 6 ft (side & rear)
Agricultural (AG)	Permitted	30 ft	Area – 2 acres Width – 200 ft Yard Setback – 25 ft (front), 15 ft (side & rear)

Section 19.30A of the Maui County Code discusses the regulations and uses associated with development that will take place within an Agricultural district of Maui. Title 19.30A.050 describes a list of permitted uses within an agricultural district, which includes “Minor Utility Facilities”. Minor utility facilities are described within section 19.04.040 of the same code as:

Transmission lines used directly in the distribution of utility services that have minor impact on adjacent land uses which include, but which are not limited to, twenty-three kilovolt transmission substations, vaults, water wells, tanks and distribution equipment, sewage pump stations, and other similar type uses.

The Proposed Action would install the gravity sewer system lines below ground and would not alter the long-term land use of the Project Area. The Proposed Action would create only a temporary disturbance to the residential neighborhood and residential and agricultural zoning districts, which would be restored to their pre-existing uses upon completion of the project. Therefore, development under the Proposed Action would not alter the land use of affected County of Maui districts and is permitted under Maui County Code Title 19. The wastewater collection system would be owned by the County of Maui and managed and operated by the County of Maui Department of Environmental Management for public use.

6.2.6 County of Maui Public Services

Public services within the jurisdiction of the County of Maui are regulated under Title 14, Public Services of the Code of the County of Maui, Hawai‘i. Public service projects that deal with wastewater are specifically regulated under Article 2 of Title 14. The purpose and intent of the Public Services Code Wastewater Article is to regulate the use, connection and construction of all public and private wastewater systems. This article further regulates the use of the publicly owned treatment works for the County of Maui and enables the County to comply with all applicable state and federal laws, including the Clean Water Act (33 U.S.C., § 1251 et seq.), and the General Pretreatment Regulations (40 CFR, Part 403).

The objectives of this article are:

A. To prevent the introduction of pollutants into the publicly owned treatment works that will interfere with its operation

B. To prevent the introduction of pollutants into the publicly owned treatment works that will pass through the publicly owned treatment works, inadequately treated, into receiving waters, groundwater or otherwise be incompatible with the publicly owned treatment works

C. To protect the general public and publicly owned treatment works personnel who may be affected by wastewater and sludge in the course of their employment

D. To promote reuse and recycling of industrial wastewater and sludge from the publicly owned treatment works

E. To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the publicly owned treatment works

F. To enable the County to comply with its permit conditions, sludge use and disposal requirements, and any other federal or state regulations to which the publicly owned treatment works is subject

As stated in **Section 2.1.2.3**, Maui County Code § 14.21A.010 requires owners of all dwellings that are used for human occupancy and abut on any street, alley, or right-of-way in which a public wastewater system is located to establish a direct connection with the system within 180 days after the date of official notice. The Proposed Action would result in the connection of approximately 200 properties that are zoned for single-family use and are serviced by septic systems and cesspools. The Proposed Action would help Maui County to further eliminate cesspools from communities around Hawai‘i and would be consistent with connection and construction requirements outlined in Title 14 of the Maui County Codes.

7. Public Participation

A community outreach program is being conducted to exchange information about the Wahikuli Subdivision Gravity Sewer System project and to work with the affected residents and the general community on how to implement the project on both personal and community levels.

The Wahikuli sewer design team participated in the County of Maui Weekly Disaster Recover Community Update Meeting on September 25, 2024, at the Lahaina Civic Center. The United States Environmental Protection Agency (EPA) provided an overview of the project to the community and key stakeholders and explain how the public can provide input, and AECOM staff were present to field questions.

At the February 5, 2025, Community Update Meeting, Shayne Agawa, Director of the County of Maui Department of Environmental Management, provided a presentation on the project, comprising a design phase update, the tentative design timeline, and an overview of the gravity sewer design the construction phase. No questions were asked by the meeting attendees, except about how to access the graphics included in the presentation. A copy of the February 5, 2025, presentation is included in **Appendix E-1**.

The design team plans to provide periodic public updates via the Weekly Disaster Recovery Community Update Meeting and is posting updates on Maui Recovers and the EPA's Maui Wildfires websites throughout the project period. The respective URLs for websites are https://www.mauirecovers.org and https://www.epa.gov/maui-wildfires.

On November 6, 2024, a pre-assessment consultation letter was sent to each homeowner in the Wahikuli subdivision, informing them of the proposed project and preparation of this environmental assessment (EA). Each homeowner was sent a copy of a project summary and a request for their comments to inform the scoping of the EA. A copy of the letter is included in **Appendix E-2**. As most of the residents of the Wahikuli subdivision remain displaced, of the approximately 250 letters sent to interested parties to subdivision homeowners, only an estimated 18 percent of the letters are assumed to have been received by the homeowners. The design team continues to work with the County of Maui and others to increase the effectiveness of consultation with the subdivision residents.

Also on November 6, 2024, a pre-assessment consultation letter was sent to state, county, and federal agencies and elected officials having jurisdiction or expertise, as well as citizen groups and individuals that may have an interest in or be affected by the Proposed Action. The letter notified them of the project and the forthcoming EA and requested their comments to inform the scoping of the EA. A list of the agencies and organizations that were consulted during the pre-assessment process is provided in **Section 10**.

A letter to interested parties will be issued notifying stakeholders of the availability of the Draft EA for review and the public comment period. The Draft EA will be available for online review and a copy will be provided to local libraries. A public meeting will be held during the public comment period to present the Draft EA and answer questions. The Draft EA will be made available to the public at least 15 days in advance of the public meeting. Comments received will be incorporated into the Final EA.

An additional letter to interested parties will be issued notifying stakeholders of the issuance of the Final EA, and the County of Maui Department of Environmental Management and United States Environmental Protection Agency findings and determinations. The Final EA, and findings and determinations will be available for online review and a copy will be provided to the Wailuku Public Library, in Wailuku, and the Hawai‘i Documents Center at the Hawai‘i State Library, in Honolulu.

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8. Findings and Determination

8.1 Hawai‘i Revised Statutes (HRS) Chapter 343 – Department of Environmental Management Anticipated Finding of No Significant Impact (FONSI)

8.1.1 Significance Criteria

The significance criteria outlined in Hawai‘i Administrative Rules (HAR) §11-200.1-13 were reviewed and analyzed to determine whether the Proposed Action would have a significant effect on the environment. The following discussion identifies each criterion followed by an analysis of whether the project meets the criterion.

(1) Irrevocably commit a natural, cultural, or historic resource.

The Project Area has previously been cleared, graded, and otherwise disturbed for the construction of the Wahikuli subdivision, roadways, and utility infrastructure. The proposed gravity sewer system would be installed in County of Maui roadway rights-of-way and as needed, easements across private property.

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool provided an Official Species List comprising 9 federally endangered plant species, and 11 federally threatened and endangered animal species that could potentially occur in the vicinity of the Project Area. A biological survey was conducted in November 2024 within the Project Area (SWCA Environmental Consultants 2024). The survey found that vegetation within the Project Area consists of ruderal and landscaped types, and no native fauna were observed.

The USFWS and Hawai‘i Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) recommended conservation measures to avoid or minimize adverse effects to protected species. These measures are discussed in **Sections 3.12 and 3.13** of this environmental assessment (EA) and include avoiding construction during critical times, as well as avoiding construction at night and using downward facing and fully shielded construction lighting if nighttime construction work is required.

Based on the information collected through the National Historic Preservation Act (NHPA) Section 106 process, the current project is not considered a threat of irreplaceable loss or destruction of significant scientific, prehistorical, historical, or archaeological data. The Federal Emergency Management Agency (FEMA) conducted a good faith effort to identify and evaluate historic properties within the area of potential effect (APE) through background research, consultation, and a field survey. Although no eligible historic properties were identified within the APE, FEMA has committed to conditions and future actions to avoid, minimize or mitigate adverse effects (see **Sections 3.15.2.1 and 3.15.2.2**).

The Proposed Action is not anticipated to irrevocably commit a natural, cultural, or historic resource.

(2) Curtail the range of beneficial uses of the environment.

The Proposed Action would use lands within the Project Area that previously have been cleared, graded, and otherwise disturbed for the construction of the Wahikuli subdivision, roadways, and utility infrastructure. The proposed gravity sewer system would be installed in the County of Maui roadway rights-of-way and as needed, easements across private property. Construction and operation of the system would preserve the use of the surrounding area for other uses, be performed in accordance with applicable state and county regulations, thereby minimizing potential impacts to air and water quality, and ambient noise levels.

The Proposed Action is not anticipated to curtail the range of beneficial uses of the environment.

(3) Conflict with the State's environmental policies or long-term environmental goals established by law.

HRS Chapter 344 establishes the State of Hawai'i Environmental Policy. The stated purpose of Chapter 344 is to "establish a state policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawai'i" (HRS Chapter 344-1). The Proposed Action would be consistent with the guidelines of HRS Chapter 344 as it would provide collection, treatment, and disposal or reuse of wastewater from the Wahikuli subdivision, construct a gravity sewer system according to County of Maui standards, and enable abandonment of cesspool and septic system in compliance with applicable requirements.

The Proposed Action is consistent with the State's long-term environmental policies and guidelines established by law.

(4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State.

The Proposed Action would have negligible positive and no adverse effects on the economy. No long-term changes in regional employment, population, or income patterns are expected. The Proposed Action would allow the County to provide wastewater collection, treatment, and disposal or reuse meeting the needs of the Wahikuli subdivision and would be an integral part of the infrastructure needed to maintain the health and welfare of the community. Cultural practices are not known to be performed in the Project Area.

No adverse effects on the economic welfare, social welfare, or cultural practices of the community or State are anticipated.

(5) Have a substantial adverse effect on public health.

During construction activities, short-term impacts to air quality would result from emissions of fugitive dust and emissions of engine exhausts both from on-site construction equipment, and from vehicles used by construction workers and trucks traveling to and from the Project Area. However, the construction equipment required for the proposed gravity sewer system is typical of equipment used for routine infrastructure development projects in urban areas, and hot spot air quality concerns associated with concentrated equipment operations would be limited. All construction work would be in conformance with the air pollution control standards contained in HAR Title 11, Chapter 59, Ambient Air Quality Standards, and Chapter 60.1, Air Pollution Control, which would minimize air quality emissions. No significant changes to long-term air quality impacts are anticipated.

Proposed construction activities would temporarily increase sound levels in the immediate vicinity of the activities. Construction activities would be carried out in accordance with HAR Title 11, Chapter 46, Community Noise Control and all federal, state, and City and County of Honolulu (CCH) laws and regulations.

The Proposed Action would provide collection, treatment, and disposal or reuse of wastewater from the Wahikuli subdivision and thereby would maintain and enhance the public health of the community. Thus, the project would have a beneficial effect on public health.

No significant adverse impacts to public health are anticipated to result from the Proposed Action.

(6) Involve adverse secondary impacts, such as population changes or effects on public facilities.

The proposed gravity sewer system would be a new public facility serving the Wahikuli subdivision. However, construction of the system is expected to involve predominantly the use of local contractors and

workers from the local area, which means that there would not be a substantial, short-term secondary effect on the population of the Island of Maui or Lahaina and nearby communities. During operation, the Proposed Action would not result in an increase in resident or visitor populations, and no long-term changes in regional employment or income patterns are expected.

The Proposed Action is not anticipated to result in adverse secondary impacts, such as population changes or effects on public facilities, including the two public parks, ʻAinakea Park and Wahikuli Terrace Park, within the Project Area.

(7) Involve a substantial degradation of environmental quality.

Short-term construction-related impacts are anticipated to be minimal and temporary in nature. All construction would comply with State of Hawaiʻi and County of Maui regulations. The use of standard construction and erosion control best management practices (BMPs) would minimize anticipated construction-related short-term impacts (i.e., air quality, geology/soils, water quality, solid waste generation, noise, and traffic). As discussed under Criterion 1, the project is not expected to result in significant impacts to protected flora or fauna, or the loss or destruction of historic sites or cultural resources.

The Proposed Action would not involve substantial degradation of environmental quality.

(8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions.

Operation of the proposed gravity sewer system would not result in substantially altering the operation of the existing Lahaina sewer system or Lahaina Wastewater Reclamation Facility. Nor would it cause a commitment to other actions.

The Proposed Action is not anticipated to have a substantial cumulative adverse effect upon the environment or involve a commitment for larger actions.

(9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat.

No federal or state threatened or endangered plant or animal species, or native plant or animal species were found to inhabit the Project Area. No substantial adverse effect on a rare, threatened, or endangered species or its habitat is expected to occur because of the Proposed Action.

(10) Have a substantial adverse effect on air or water quality or ambient noise levels.

Construction associated with the proposed gravity sewer system within the Project Area would result in short-term, intermittent air quality impacts within and beyond the Project Area due to the operation of construction equipment and vehicles, and privately-owned vehicles. Site clearing, grubbing, excavation, and grading would result in localized increases in fugitive dust during overall sewer system construction. However, all construction activities would comply with the provisions of HAR 11-60.1-33, *Fugitive Dust*. Dust management BMPs such as regular watering would be implemented for construction activities. Therefore, temporary construction activities under the Proposed Action are anticipated to have minor impacts to air quality.

Potential pumping equipment to be installed where connecting to the sewer system via gravity is difficult and improvement to existing pumping stations to be utilized to convey wastewater to the Lahaina sewer system and Lahaina Wastewater Reclamation Facility may involve operation of minor stationary combustion sources, e.g., a standby generator, that could be regulated under DOH air permitting regulations (DOH Title 11, Chapter 60.1). During the design phase, if applicable, the implication of air permitting requirements under the Proposed Action at pump stations will be evaluated to ensure potential operational air quality impacts would indeed be minor as anticipated. Therefore, anticipated air quality impacts from operational activities are not expected to interfere with the attainment of NAAQS.

The Project Area is located mauka, east, of Honoapi‘ilani Highway and a minimum of 100 feet from the shoreline of the ‘Au‘au Channel in the Pacific Ocean. There are no surface waters located within the Project Area. A non-perennial stream, Wahikuli stream, is located to the north, outside the Project Area. The Proposed Action would not negatively impact any nearby groundwater systems as the proposed trench depth is above the groundwater table. BMPs such as sediment and erosion controls would be implemented during the construction phase of the project to mitigate any potential surface water impacts due to runoff.

In general, construction activities would be short with low intensity for the installation of the proposed gravity sewer system and would have a minor and temporary impact to noise sensitive land uses in or adjacent to the Project Area. Operational noise associated with potential pump operation in certain areas would have adverse noise impacts to sensitive receptors. However, such noise impacts are considered minor.

The Proposed Action is not anticipated to have a substantial adverse effect on air or water quality or ambient noise levels.

(11) Have a substantial adverse effect on or be likely to suffer damage by being in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The Project Area is along the coast but is located mauka, east, of Honoapi‘ilani Highway, and a minimum of 100 feet from the shoreline. A narrow strip of land along Malo Street on the makai, west, edge of the Project Area boundary is located in an AE Zone, an area subject to inundation by the 1-percent-annual-chance flood event with a known base flood elevation. Portions of the Project Area are mapped as within a tsunami evacuation zone and other portions are within an extreme tsunami evacuation zone. A narrow strip of the Project Area is within the projected sea level rise boundaries.

The project is not located within a beach, an erosion-prone area, or estuary, fresh water, or coastal waters. The only active volcano on the Island of Maui, Haleakalā, is located in eastern Maui, whereas the Project Area is located in West Maui. According to the Maui County Hazard Mitigation Plan Update (County of Maui Emergency Management Agency 2020), all infrastructure within Maui County is considered at risk for earthquakes, and underground infrastructure such as water and sewer systems are especially vulnerable.

Implementation of the Proposed Action would not result in an increased threat from sea level rise or flooding at or surrounding the Project Area. As the proposed gravity sewer system would be constructed underground, flooding and sea level rise are not expected to impact the proposed project. However, as underground infrastructure such as water and sewer systems are especially vulnerable earthquakes, the system would be seismically constructed to withstand earthquakes in accordance with Hawai‘i State Building Code.

The Proposed Action is not anticipated to have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area.

(12) Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies.

Any construction impacts to scenic vistas and view planes are expected to be short-term and would cease after construction. In the long term, the Proposed Action is not anticipated to alter the viewshed from the surrounding area.

No substantial adverse effect on scenic vistas or view planes identified in county or state plans or studies are anticipated to result from the Proposed Action.

(13) Require substantial energy consumption or emit substantial greenhouse gases.

The Proposed Action would involve the commitment of fuel for equipment, vehicles, and machinery during construction. Once construction is complete, operating the gravity sewer system would not substantially increase energy consumption or increase greenhouse gas emissions associated with operating the Lahaina sewer system or Lahaina Wastewater Reclamation Facility.

The Proposed Action is not anticipated to require substantial energy consumption or emit substantial greenhouse gases.

8.1.2 Determination

Based on the findings presented in this document and the above criteria, the Proposed Action is not expected to have a significant impact on the environment. In accordance with HRS Chapter 343 and HAR 11 Chapter 200.1, the project does not require preparation of an environmental impact statement, and a finding of no significant impact is anticipated to be issued.

8.2 National Environmental Policy Act – EPA Preliminary Finding of No Significant Impact (FONSI)

The planning and design of the Wahikuli Subdivision Gravity Sewer System are supported by Federal Emergency Management Agency (FEMA) funding through its mission assignment authority and managed by the United States Environmental Protection Agency (EPA) through its contractor, AECOM. The FEMA funding is through Robert T. Stafford Disaster Relief and Emergency Assistance Act, or "Stafford Act" (codified as amended at 42 United States Code [U.S.C.] § 5121 et seq.). Construction funds are not yet in place.

Project construction may be funded by both federal and state funds, including the State of Hawai‘i DOH Clean Water State Revolving Fund (CWSRF) Program. The CWSRF Program was created by the federal Water Quality Act of 1987 and authorizes low-interest loans for the construction of publicly owned wastewater treatment works. In 1988, the Hawai‘i State Legislature passed Act 365, now Chapter 342D of the HRS, to establish the State Water Pollution Control Revolving Fund to receive the federal capitalization grant. HRS 342D, Part V (Water Pollution Control Financing), and, more specifically, HRS § 342D-81 set forth that the State's policy is to promote water pollution prevention and control, including the use of recycled water, by financing eligible projects consistent with applicable federal and state laws. The State Revolving Fund receives annual funding from EPA, which DOH is then responsible for allocating among eligible projects. The County of Maui has also requested construction funding for this project under the Water Resources Development Act, which authorizes the United States Army Corps of Engineers (USACE) to assist non-federal interests in carrying out water-related environmental infrastructure, and resource protection and development projects, should such funds become available.

8.2.1 Project Location and Description

The Wahikuli Subdivision Gravity Sewer System project is located north of the Lahaina town center, on the western slopes and coastal plains of the Island of Maui, about 12 miles west of Wailuku, the county seat of the County of Maui. The subdivision is within the West Maui Community Plan Area, which aligns with the Lahaina Judicial District, and is located mauka, east, of Honoapi‘ilani Highway, State Route 30, along the shoreline of the ‘Au‘au Channel in the Pacific Ocean.

The proposed project involves designing and constructing a gravity sewer system for the Wahikuli subdivision. The gravity sewer system would be installed in the County of Maui roadway rights-of-way and as needed, easements across private property. The system would connect to the existing Lahaina sewer system at the operational Lahaina No. 3 Pump Station located approximately 975 feet south of Fleming Road, on the mauka, eastern, side of Honoapi‘ilani Highway. The wastewater from the Wahikuli subdivision would be conveyed via the No. 3 Pump Station, its force main, and gravity sewers to the No. 2 and No. 1 Pump Stations which then lead to the Lahaina Wastewater Reclamation Facility.

To provide sewer service to the temporary group housing being constructed at the Kilohana temporary group housing site (FEMA 2024a), the USACE, on behalf of FEMA, has installed a gravity sewer main underground along the length of Fleming Road and a segment of Wahikuli Terrace Park Access Road within the Wahikuli Subdivision Gravity Sewer System Project Area. Approximately 30 single-family house lots, among the 231 Wahikuli subdivision lots, would not be connected to the Wahikuli Subdivision Gravity Sewer System and instead will connect to the USACE-installed gravity sewer main along Fleming Road. The USACE also replaced sanitary manholes (SMHs) upstream along Wahikuli Terrace Park Access Road and Malo Street. The Wahikuli Subdivision Gravity Sewer System project would connect to one of the new manholes, depending on detailed analysis of the hydraulics during final design.

The Wahikuli Subdivision Gravity Sewer System project may involve installing sump or grinder pumps for certain properties where connecting to the sewer system via gravity is difficult due to grade differences. Such situations can arise when a property's private sewer line is lower in elevation than the sewer system in the adjacent roadway. Additionally, easements may be necessary for constructing sewer laterals and County sewer lines for properties that do not have direct access to a public roadway. Both activities would occur on private property. The need for sump or grinder pumps, and easements will be assessed in the EA and confirmed during the design phase of the proposed project.

All construction staging, including the storage of equipment and vehicles, stockpiles, waste bins, and other construction-related materials, would occur within the Project Area.

8.2.2 Purpose and Need for Proposed Project

The Wahikuli subdivision consists of approximately 231 single-family house lots, each currently serviced by a cesspool or a septic system. The construction of a gravity sewer system in the Wahikuli subdivision would create a more resilient and sustainable wastewater management system, better equipped to withstand climate impacts and disasters. The proposed project aims to improve wastewater management to protect human health, nearshore waters, and coral reefs while minimizing the seepage of pollutants from the cesspools into the Class A waters along Wahikuli Wayside Park. It also seeks to safeguard natural and cultural areas that are important to local communities and watersheds. Furthermore, this would help to support broader wildfire recovery efforts by enhancing resident's quality of life, promoting economic development, and reviving land values.

Implementing the proposed gravity sewer system would also facilitate compliance with Act 125 of 2017, as amended by Act 87 of 2022, which requires that by January 1, 2050 all cesspools in the State, unless granted exemption, shall upgrade or convert to a wastewater system approved by the State of Hawai'i DOH, or connect to a sewer system.

The purpose of the Wahikuli Subdivision Gravity Sewer System project is to enable the individual residents of the Wahikuli subdivision to connect to a sewer system and properly abandon their cesspool or septic system in compliance with applicable requirements. The need for action is driven by the public health and environmental concerns associated with cesspools, as described in **Section 2.1.2**.

8.2.3 Environmental Consequences

In compliance with NEPA, EPA has prepared a Draft EA that analyzes the environmental impacts of the Wahikuli Subdivision Gravity Sewer System project. After considering a wide range of regulatory, environmental (both natural and human), and socioeconomic factors, the Draft EA did not identify any significant impacts to the environment that would result from the implementation of the proposed project.

The gravity sewer system would be installed in previously disturbed areas within County of Maui roadway rights-of-way and as needed, easements across private property. There are no designated critical habitats for listed plant or animal species in the Project Area. A biological survey was conducted in November 2024 within the Project Area for the proposed Wahikuli Subdivision Gravity Sewer System project. No threatened or endangered plant or animal species were observed during the survey. In addition, numerous measures have been incorporated into the project to further avoid and minimize potential effects (see **Sections 3.12 and 3.13**).

Based on the information collected through the NHPA Section 106 process, the current project is not considered a threat of irreplaceable loss or destruction of significant scientific, prehistorical, historical, or archaeological data. FEMA conducted a good faith effort to identify and evaluate historic properties within the APE through background research, consultation, and a field survey. Although no eligible historic properties were identified within the APE, FEMA has committed to conditions and future actions to avoid, minimize or mitigate adverse effects (see **Sections 3.15.2.1 and 3.15.2.2**).

The Wahikuli Subdivision Gravity Sewer System project would have negligible positive and no adverse effects on the economy. No long-term changes in regional employment, population, or income patterns are expected. The Proposed Action would allow the County to provide wastewater collection, treatment, and disposal or reuse meeting the needs of the Wahikuli subdivision and would be an integral part of the infrastructure needed to maintain the health and welfare of the community. The project would not result in population changes in Lahaina or nearby communities.

The proposed project would result in minor, short-term impacts to noise, air quality, and traffic within and in the immediate vicinity of the Project Area during the period of construction. However, operation of the gravity sewer system would not contribute substantial additional air emissions, contribute additional light pollution, or detrimentally affect air or water quality, noise, or traffic in the local area.

After carefully considering the regulatory, environmental (both natural and human), and socioeconomic factors as described in the Draft EA, EPA has not identified any significant impacts to the environment that would result from implementation of the proposed project.

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9. List of Permits and Approvals

Federal

Section 7, Endangered Species Act consultation

Section 106, National Historic Preservation Act consultation

State of Hawai‘i Department of Health

Approval to Construct

Approval to Use

National Pollutant Discharge Elimination System Construction Stormwater Permit

Noise Permit

Noise Variance (only if required)

County of Maui

Land Use Special Permit

Special Management Area Use Permit (only if required)

Grading Permit

Fence Permit

Sign Permit (only if required)

Permit to Work Within County Right-of-Way

Sewage and Works Permit

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10. Consulted Parties

10.1 Pre-Assessment Consultation

In accordance with the requirements of Hawai'i Administrative Rules Title 11 (State of Hawai'i Department of Health), Chapter 200.1 (Environmental Impact Statement Rules), Section 9 regarding early consultation, the agencies and organizations listed in **Table 10-1** were consulted during the pre-assessment process that took place during November 2024. Each agency was sent a copy of a project summary and a request for their written comments to inform the scoping of the environmental assessment (EA). All comment letters received, as well as formal response letters to the same, are included in **Appendix E-2**.

Table 10-1. Agencies and Organizations Consulted – Pre-Assessment

	Comments Received?	
Agency/Organization	**Yes**	**No**
Federal Agencies		
Department of Agriculture – National Resource Conservation Service		✓
Department of Commerce – National Marine Fisheries Service		✓
Department of Homeland Security – Coast Guard		✓
Department of the Army – Army Corps of Engineers		✓
Department of the Interior – Geological Survey, Pacific Islands Water Science Center		✓
Department of the Interior – National Parks Service		✓
Department of the Interior – Pacific Islands Fish and Wildlife Service		✓
Department of the Navy		✓
Department of Transportation – Federal Aviation Administration		✓
Department of Transportation – Federal Highways Administration		✓
Department of Transportation – Federal Transit Administration		✓
Environmental Protection Agency		✓
State of Hawai'i Agencies		
Department of Agriculture		✓
Department of Accounting and General Services	✓	
Department of Accounting and General Services – Archives Division		✓
Department of Business, Economic Development and Tourism		✓
Department of Business, Economic Development and Tourism – Research Division Library		✓
Department of Business, Economic Development and Tourism – Office of Planning and Sustainable Development	✓	
Department of Defense		✓
Department of Education		✓

Agency/Organization	Comments Received? Yes	No
Department of Education – Hawai'i State Library, Hawai'i Documents Center	✓	
Department of Hawaiian Home Lands		✓
Department of Health – Environmental Health Administration		✓
Department of Health – Environmental Health Administration, Hazard Evaluation and Emergency Response Office		✓
Department of Health – Environmental Health Administration, Wastewater Branch		✓
Department of Land and Natural Resources	✓	
Department of Land and Natural Resources – Division of State Parks		✓
Department of Land and Natural Resources – State Historic Preservation Division		✓
Department of Transportation	✓	
Legislative Reference Bureau Library		✓
Office of Hawaiian Affairs		✓
County of Maui Agencies		
Department of Agriculture		✓
Department of Environmental Management		✓
Department of Fire and Public Safety		✓
Department of Housing		✓
Department of Human Concerns		✓
Department of Parks and Recreation		✓
Department of Planning		✓
Department of Public Works		✓
Department of Transportation		✓
Department of Water Supply		✓
Police Department	✓	
Elected Officials		
U.S. Senator – Mazie Hirono		✓
U.S Representative, 2nd District – Jill Tokuda		✓
State Senator, 6th Senate District – Angus L. K. McKelvey		✓
State Representative, 14th House District – Elle Cochran		✓
Maui County Council Representative – Council Chair, Alice Lee		✓
Maui County Council Representative – Vice Chair, Yuki Lei Sugimura		✓
Maui County Council Representative – Presiding Officer Pro Tempore, Tasha Kama		✓
Maui County Council Representative – Councilmember, Tom Cook		✓

	Comments Received?	
Agency/Organization	**Yes**	**No**
Maui County Council Representative – Councilmember, Gabe Johnson		✓
Maui County Council Representative – Councilmember, Tamara Paltin (West Maui Residency Area)		✓
Maui County Council Representative – Councilmember, Keani Rawlins-Fernandez		✓
Maui County Council Representative – Councilmember, Shane Sinenci		✓
Maui County Council Representative – Councilmember, Nohelani U‘u-Hodgins		✓
Public Libraries		
Kahului Public Library		✓
Lahaina Public Library – Closed due to wildfire		✓
Wailuku Public Library		✓
News Media		
Maui News		✓
Maui Time Weekly		✓
Local Organizations/Individuals		
Boys and Girls Club of Maui – Lahaina location closed due to wildfire		✓
King Kamehameha I‘II Elementary School – Temporary campus site		✓
Lahaina Civic Center		✓
Lahaina Comprehensive Health Center		✓
Lahaina Fire Station		✓
Lahaina Intermediate School		✓
Lahaina Water Treatment Facility		✓
Lahainaluna High School		✓
Maui Cultural Lands, Inc.		✓
Princess Nāhi‘ena‘ena Elementary School		✓
Sne Patel, President of the Lahaina Town Action Committee (LAC)		✓
Native Hawaiian Organizations (NHOs)		
‘Aha Moku O Kahikinui		✓
‘Aha Moku O Maui Inc.		✓
‘Ao‘ao O Nā Loko I‘a O Maui		✓
Association of Hawaiian Civic Clubs		✓
Brian Kaniela Nae‘ole Naauao		✓
Council for Native Hawaiian Advancement		✓
Friends of ‘Iolani Palace		✓

	Comments Received?	
Agency/Organization	**Yes**	**No**
Hale Mua Cultural Group		✓
Hawaiian Community Assets, Inc.		✓
Hawaiian Islands Land Trust		✓
Honua Consulting, LLC		✓
Hui No Ke Ola Pono		✓
Kamehameha Schools		✓
Kimokeo Foundation		✓
Kipuka Olowalu		✓
Kululoiʻa Lineage – I ke Kai ʻo Kululoiʻa		✓
Maui Lānaʻi Island Burial Council – Scott Fisher		✓
Na Aikane O Maui		✓
National Trust for Historic Preservation, c/o Elizabeth Merritt		✓
ʻOhana Keaweamahi		✓
ʻOhana Keohokālole		✓
Paukukalo Hawaiian Homes Community Association		✓
Protect Keopuka Ohana		✓
Pili Koko		✓
The I Mua Group		✓

10.2 Agencies and Organizations Consulted on the Draft EA

Availability of the Draft EA for review and comment will be published in the Environmental Review Program *Environmental Notice* dated April 23, 2025. The United States Environmental Protection Agency (EPA) will directly notify the agencies, organizations, and individuals listed in **Section 10.1** regarding the availability of the Draft EA for review and comment. Legal notice will be posted in the Maui News and Maui Time Weekly. Additionally, EPA concluded consultation with the Hawaiʻi State Historic Preservation Division in accordance with Section 106 of the National Historic Preservation Act, and with the United States Fish and Wildlife Service in accordance with Section 7 of the Endangered Species Act.

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