Harry Kim
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Roy Takemoto
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William A. Kucharski
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County of Hawai'i

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720
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June 30, 2020

Mr. Keith Kawaoka, Acting Director
Office of Environmental Quality Control
State of Hawai'i, Department of Health
235 South Beretania Street, Room 702
Honolulu, Hawai'i 96813

Subject: Final Environmental Assessment and Finding of No Significant Impact for Wai'ōhinu Transfer Station Repairs and Enhancements, Ka'ū District, Island of Hawai'i TMK: (3) 9-5-005:001 (por.) and Kaulia Road right-of-way (por.)

Dear Mr. Kawaoka:

With this letter, the County of Hawai'i Department of Environmental Management (DEM) hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Wai'ōhinu Transfer Station Repairs and Enhancements situated at TMK parcel (3) 9-5-005:001 and a portion of the Kaulia Road right-of-way on the island of Hawai'i for publication in the next available edition of *The Environmental Notice*.

DEM has reviewed the comments received during the 30-day comment period on the draft environmental assessment that ended on June 8, 2020. Our agency has determined that the project will not have significant environmental effects and has issued a Finding of No Significant Impact (FONSI).

Simultaneous with this letter, we will be utilizing the Office of Environmental Quality Control's online submission platform to provide your office with the required information and files concerning the final environmental assessment, along with a PDF-formatted electronic copy of the final environmental assessment. It is noted that no comment period follows publication in *The Environmental Notice*.

Should you have any questions, please contact Mr. Gregory Goodale, Solid Waste Division Chief at (808) 961-8515 (Gregory.Goodale@hawaiicounty.gov), or Ms. Rebecca Candilasa of Wilson Okamoto Corporation at (808) 946-2277.

Sincerely,

William A. Kucharski
Director

cc: Gregory Goodale, Solid Waste Division Chief
Rebecca Candilasa, Wilson Okamoto Corporation

From: webmaster@hawaii.gov
To: HI Office of Environmental Quality Control
Subject: New online submission for The Environmental Notice
Date: Tuesday, June 30, 2020 3:19:21 PM

Action Name

Waiʻōhinu Transfer Station Repairs and Enhancements

Type of Document/Determination

Final environmental assessment and finding of no significant impact (FEA-FONSI)

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

Kaʻū, Hawaiʻi

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

(3) 9-5-005:001 (por.), Kaulia Road right-of-way

Action type

Agency

Other required permits and approvals

Numerous

Proposing/determining agency

County of Hawaiʻi, Department of Environmental Management

Agency contact name

Ryan Dixon

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Ryan.Dixon@hawaiicounty.gov

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Hilo, HI 96720
United States
Map It

Was this submittal prepared by a consultant?

Yes

Consultant

Wilson Okamoto Corporation

Consultant contact name

Rebecca Candilasa

Consultant contact email

rcandilasa@wilsonokamoto.com

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(808) 946-2277

Consultant address

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826
United States
Map It

Action summary

The Department of Environmental Management is proposed repairs and enhancements to the Wai'ōhinu Transfer Station. The proposed project consists of reconfiguring the site layout to improve ease-of-use and traffic flow, enhancing the various collection areas, and performing other site work needed to provide internal roadways, drainage, an individual wastewater system, and utilities. Existing transfer station operations will be relocated on the south side of the existing transfer station chutes and collection areas for various waste streams will be provided within the project area. Kaulia Road improvements will remain within the existing right-of-way and will be limited to the minimum necessary to provide a smooth transition to the stabilized roadway on-site.

Reasons supporting determination

Refer to Chapter 7 within the Final EA.

Attached documents (signed agency letter & EA/EIS)

- Waiohinu-Transfer-Station-Repairs-and-Enhancements-Final-EA_6-29-2020.pdf
- Waiohinu-Final-EA-Transmittal-Letter.pdf

Shapefile

- The location map for this Final EA is the same as the location map for the associated Draft EA.

Action location map

- Project-Area-2-Waiohinu.gdb.zip

Authorized individual

Rebecca Candilasa

Authorization

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

Final Environmental Assessment

Waiʻōhinu Transfer Station Repairs and Enhancements

Kaʻū, Hawaiʻi Island, Hawaiʻi

Prepared For:

Prepared By:

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

July 2020

FINAL ENVIRONMENTAL ASSESSMENT

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENTS

Kaʻū District
Island of Hawaiʻi, State of Hawaiʻi
Tax Map Keys: (3) 9-5-005:001 (por.)
and Kaulia Road right-of-way (por.)

Prepared For:

County of Hawaiʻi
Department of Environmental Management
Solid Waste Division
345 Kekūanāoʻa Street, Suite 41
Hilo, Hawaiʻi 96720

Prepared By:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaiʻi 96826
WOC Job No. 10530-01

JULY 2020

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LIST OF ACRONYMS AND ABBREVIATIONS

ALISH	Agricultural Lands of Importance to the State of Hawaiʻi
BMP	Best Management Practices
CDP	Census Designated Place
CFR	Code of Federal Regulations
CIP	Capital Improvement Project
CO	Carbon monoxide
CWSRF	Clean Water State Revolving Fund
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
DBEDT	Department of Business, Economic Development and Tourism
DEM	County of Hawaiʻi Department of Environmental Management
DLNR	State of Hawaiʻi Department of Land and Natural Resources
DOE	State of Hawaiʻi Department of Education
DOFAW	State of Hawaiʻi DLNR, Division of Forestry and Wildlife
DOH	State of Hawaiʻi Department of Health
DOT	Department of Transportation
DPW	Department of Public Works
DWS	County of Hawaiʻi Department of Water Supply
EA	Environmental Assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWCA	Fish and Wildlife Coordination Act
GHG	Greenhouse gas
H_2S	Hydrogen sulfide
HAR	Hawaiʻi Administrative Rules
HAZWPR	Hazardous Waste Operations and Emergency Response
HDOT	State of Hawaiʻi Department of Transportation
HRS	Hawaiʻi Revised Statutes
IRSWMP	Integrated Resources and Solid Waste Management Plan
IWS	individual wastewater system
km	kilometers
LRFI	Literature Review and Field Investigation
LSB	Land Study Bureau
LUC	State Land Use Commission
LUPAG	Land Use Pattern Allocation Guide
m	meters
MGD	Million gallons per day
NAAQS	National Ambient Air Quality Standards
NCSS	National Cooperative Soil Survey
NHPA	National Historic Preservation Act
NO_2	Nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service

NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
O_3	Ozone
OEQC	Office of Environmental Quality Control
Pb	Lead
PM_X	Particulate matter
SDWA	Safe Drinking Water Act
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Places
SMA	Special Management Area
SO_2	Sulfur dioxide
SWMP	Solid Waste Management Permit
TMK	Tax Map Key
UIC	Underground Injection Control
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WHSL	West Hawaiʻi Sanitary Landfill

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SUMMARY

Project Name:	Waiʻōhinu Transfer Station Repairs and Enhancements
Location:	Ka'ū District, Island of Hawaiʻi, State of Hawaiʻi
Tax Map Key (TMK):	(3) 9-5-005:001, Kaulia Road right-of-way
Proposing Agency:	County of Hawaiʻi Department of Environmental Management Solid Waste Division 345 Kekūanāoʻa Street, Suite 41 Hilo, HI 96720
Recorded Fee Owner:	State of Hawaiʻi
Existing Use:	Refuse transfer facility
State Land Use Classification:	Agricultural
County General Plan Designation:	Natural Area
County Zoning Designation:	Agricultural (A-20a)
Proposed Action:	The County of Hawaiʻi Department of Environmental Management (DEM) is planning to repair and enhance the Waiʻōhinu Transfer Station located in the Kaʻū District of Hawaiʻi Island. The proposed project consists of reconfiguring the site layout to improve ease-of-use and traffic flow, enhancing the various collection areas, and performing other site work needed to provide internal roadways, drainage, an individual wastewater system, and utilities. Existing transfer station operations will be relocated on the south side of the existing transfer station chutes and collection areas for various waste streams will be provided within the project area. Kaulia Road improvements will remain within the existing right-of-way and will be limited to the minimum necessary to provide a smooth transition to stabilized roadway on-site. Improvements associated with the project are intended to support the following components: recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; ReUse area to be used by a contracted vendor; HI-5 redemption area to be used by a contracted vendor; future green waste area; Nets to Energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste.

Impacts:

The proposed action may result in temporary air quality and soil erosion impacts associated with construction activities. These impacts will be mitigated through implementation of best management practices (BMPs) and adherence to federal, state, and county rules and regulations. In addition, a dust control management plan will be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. Measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction will be incorporated into the project plans and specifications. Post-construction, all development generated runoff will be retained on-site where it will be directed to shallow drywells that will allow water to slowly percolate into the ground. Cumulatively, any potential air quality and soil erosion impacts are anticipated to be negligible.

Proposed mulching activities will introduce a new source of noise to the project area. However, it is anticipated that the noise generated by mulching activities will be similar in character and intensity to existing noise generators in the project area and will be offset by a reduction in noise generated by truck traffic servicing the Waiʻōhinu Transfer Station with construction of the tipping floor within an enclosed structure.

The contractor will be responsible for adhering to project plans and specifications which will incorporate recommended avoidance and impact minimization measures to protect historic and cultural resources as well as endangered or threatened species that may traverse the project area. Biosecurity protocols will also be incorporated into project plans and specifications to prevent the introduction and spread of harmful invasive species on Hawaiʻi Island.

Determination:

Finding of No Significant Impact (FONSI)

PREFACE

This Final Environmental Assessment (EA) / Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawaiʻi Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawaiʻi Administrative Rules (HAR), Department of Health, State of Hawaiʻi. Proposed is an agency action by the County of Hawaiʻi Department of Environmental Management (DEM) to repair and enhance the Waiʻōhinu Transfer Station located in the Kaʻū District, Island of Hawaiʻi, State of Hawaiʻi.

The proposed action involves the use of State lands and funds and is subject to the environmental review process prescribed under Chapter 343, HRS. Since the project involves repairs and minor improvements to an existing transfer station, it may be eligible for exemption from the preparation of an environmental assessment based on the Comprehensive Exemption List for the County of Hawaiʻi Department of Environmental Management concurred upon by the Environmental Council on January 8, 2019. However, an EA is being prepared nonetheless to ensure that environmental concerns are given appropriate consideration in the decision-making process along with economic and technical considerations. Therefore, this EA has been prepared in accordance with Title 11, Chapter 200.1, Hawaiʻi Administrative Rules of the Department of Health and includes an assessment of the potential environmental, social, cultural and economic impacts associated with the proposed activities. Pursuant to HRS §343-5(b), the County is the proposing agency and will determine the significance of potential environmental impacts. A Finding of No Significant Impact (FONSI) determination was made for the proposed action.

The project may be funded in part by the Clean Water State Revolving Fund (CWSRF) program administered by the State of Hawaiʻi as it relates to surface and underground water protection. Therefore, a discussion on the project's compliance with cross-cutting federal authorities as set forth in the CWSRF regulations (40 CFR §35.3145) is also included in this EA. Components not funded by the CWSRF will come from County Capital Improvement Project (CIP) funds.

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1. INTRODUCTION

1.1 Project Location

Waiʻōhinu Transfer Station is located in the Waiʻōhinu area of the Kaʻū District of Hawaiʻi Island (see Figure 1-1). The site is immediately surrounded by undeveloped land that is heavily vegetated. Access to the site is provided by Kaulia Road which intersects with Māmalahoa Highway (Route 11) near Mile Marker 66 approximately 2 miles west of Nāʻālehu and 57 miles south of Kailua-Kona. Kaulia Road terminates at the Waiʻōhinu Transfer Station.

The project area encompasses approximately 5 acres of the approximately 36-acre parcel identified as Tax Map Key (TMK) [3] 9-5-005:001 and a portion of the Kaulia Road right-of-way (see Figure 1-2). TMK 9-5-005:001 is owned by the State of Hawaiʻi and is under the control and management of the County of Hawaiʻi by Executive Order 3247.

1.2 Existing and Surrounding Uses

Waiʻōhinu Transfer Station currently operates under Solid Waste Management Permit (SWMP) No. TF-0078-14 issued by the State of Hawaiʻi Department of Health (DOH) pursuant to HAR Chapter 11-58.1. Waste streams accepted at the facility include household solid waste, mixed recyclables and non-HI-5 glass, and electronic waste on a periodic basis. These items are brought to the facility by residential self-haulers from nearby communities, such as Waiʻōhinu, Nāʻālehu, and Discovery Harbour. A HI-5 Redemption Facility, operated by a contracted vendor under a separate SWMP, and a ReUse Center, which does not require a SWMP, are also located and operated on-site.

Agricultural land and rural community developments make up most of the land uses surrounding the Waiʻōhinu Transfer Station (see Figure 1-3). Kauahaʻao Congregational Church and Waiʻōhinu Park are also located nearby. Beyond Waiʻōhinu is the Kaʻū Forest Reserve to the north and several cliff (pali) features to the south. The Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) uses the Kiolakaʻa Ranger Station, located about 2 miles northwest of the transfer station, to house staff and volunteers working in the area. Discovery Harbour and Nāʻālehu are the nearest communities providing goods and services for the Waiʻōhinu community.

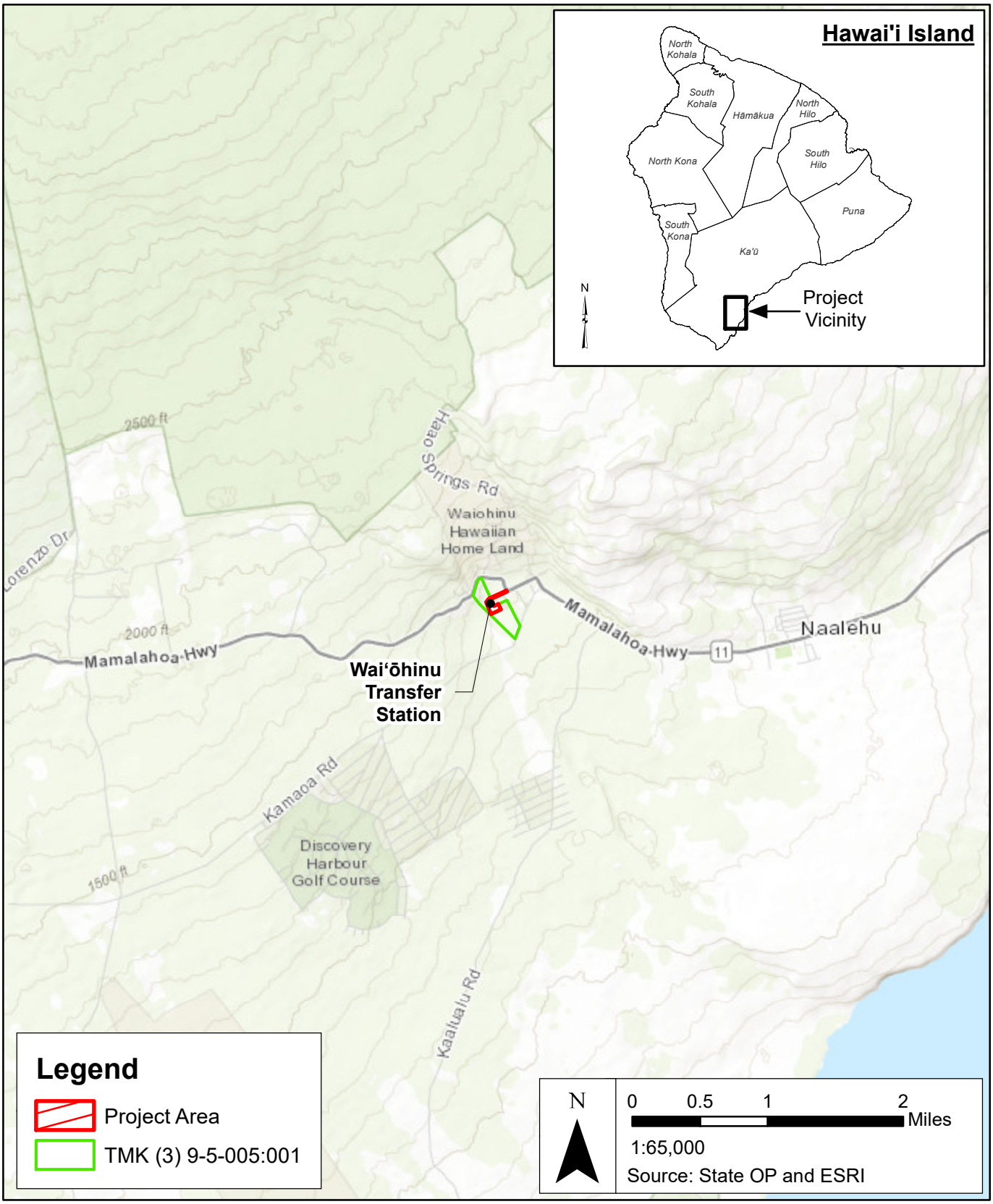

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FIGURE 1-1

LOCATION MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

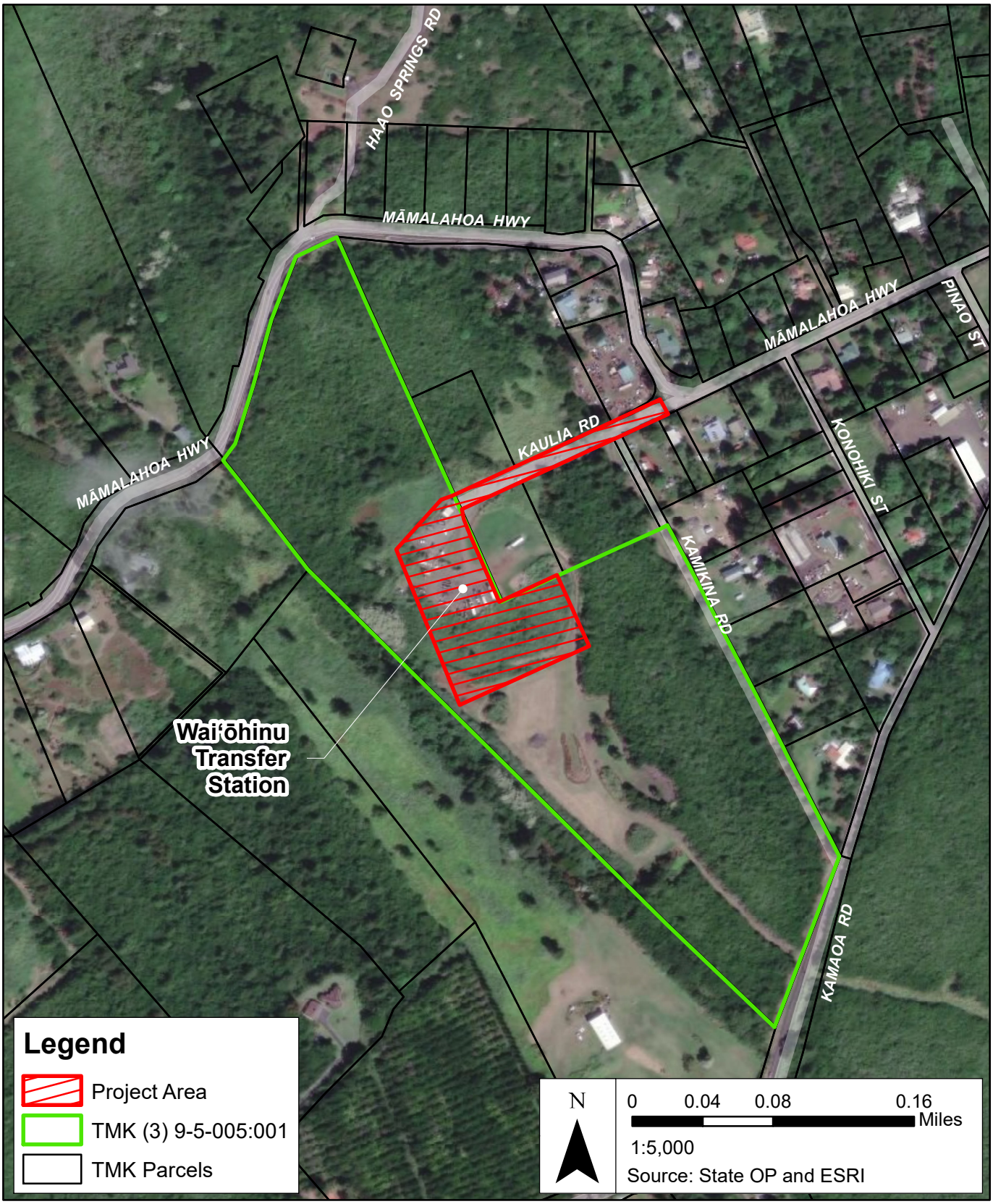

FIGURE 1-2

TMK [(3) 9-5-005:001] MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

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FIGURE 1-3

SURROUNDING LAND USE MAP

WAI‘ŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀ‘ĀLEHU, HAWAI‘I ISLAND, HAWAI‘I

2. PROJECT DESCRIPTION

2.1 Purpose and Need

According to the 2009 Update of the County of Hawaiʻi *Integrated Resources Solid Waste Management Plan* (IRSWMP), there have been relatively few major repair or improvement projects conducted to maintain or upgrade the County's current transfer stations and convenience centers since their initial construction. Many of the transfer stations and convenience centers have deteriorated and have existing engineering or structural deficiencies that require repair or complete renovation. Additionally, the majority of the transfer stations and convenience centers have not been upgraded to accommodate population growth within nearby communities, or to effectively accommodate recycling or reuse.

The County of Hawaiʻi Department of Environmental Management (DEM) conducted detailed inspections of all the transfer stations and convenience centers in 2006 in an effort to inventory and assess the conditions of each station. Infrastructure and equipment needing repair was identified and documented, and the layout and capacity of each station was evaluated based on the needs and current population of the surrounding communities. DEM then drafted the *Island Wide Transfer Stations Repair and Enhancement Plan*, which detailed the results of the inspections conducted at each transfer station and convenience center and rated the condition of each facility. The Waiʻōhinu Transfer Station was assessed as having major engineering deficiencies that would require reconstruction of the facility. However, funding at the time had only been authorized for reconstruction of the Pāhoa, Volcano and Glenwood stations.

In 2018, heavy rains damaged a portion of the retaining wall adjacent to the existing disposal chutes. Changes to waste disposal procedures are being enforced until improvements to the transfer station can be made to prevent further damage to the disposal area. These damages along with the poor condition of the existing facility underscore the critical need for improvements. Therefore, the purpose of the proposed project is to repair and enhance the existing transfer station to meet the current and future needs of the growing population of the surrounding communities, to ensure safety and regulatory compliance, and to reduce long-term maintenance and repair costs.

2.2 Proposed Project

The proposed project generally consists of reconfiguring the existing site layout, enhancing various recycling and solid waste collection areas, and performing site work needed to maintain and operate the Waiʻōhinu Transfer Station. Proposed improvements associated with the project are summarized below and are illustrated in Figure 2-1.

The existing site layout within the transfer station would be reconfigured to improve ease-of use and traffic flow. Existing transfer station operations would be relocated on the south side of the existing disposal chutes and designated collection areas for the various waste streams would be provided. Improvements are intended to support the following components:

- Recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods;
- ReUse area to be used by a contracted vendor;

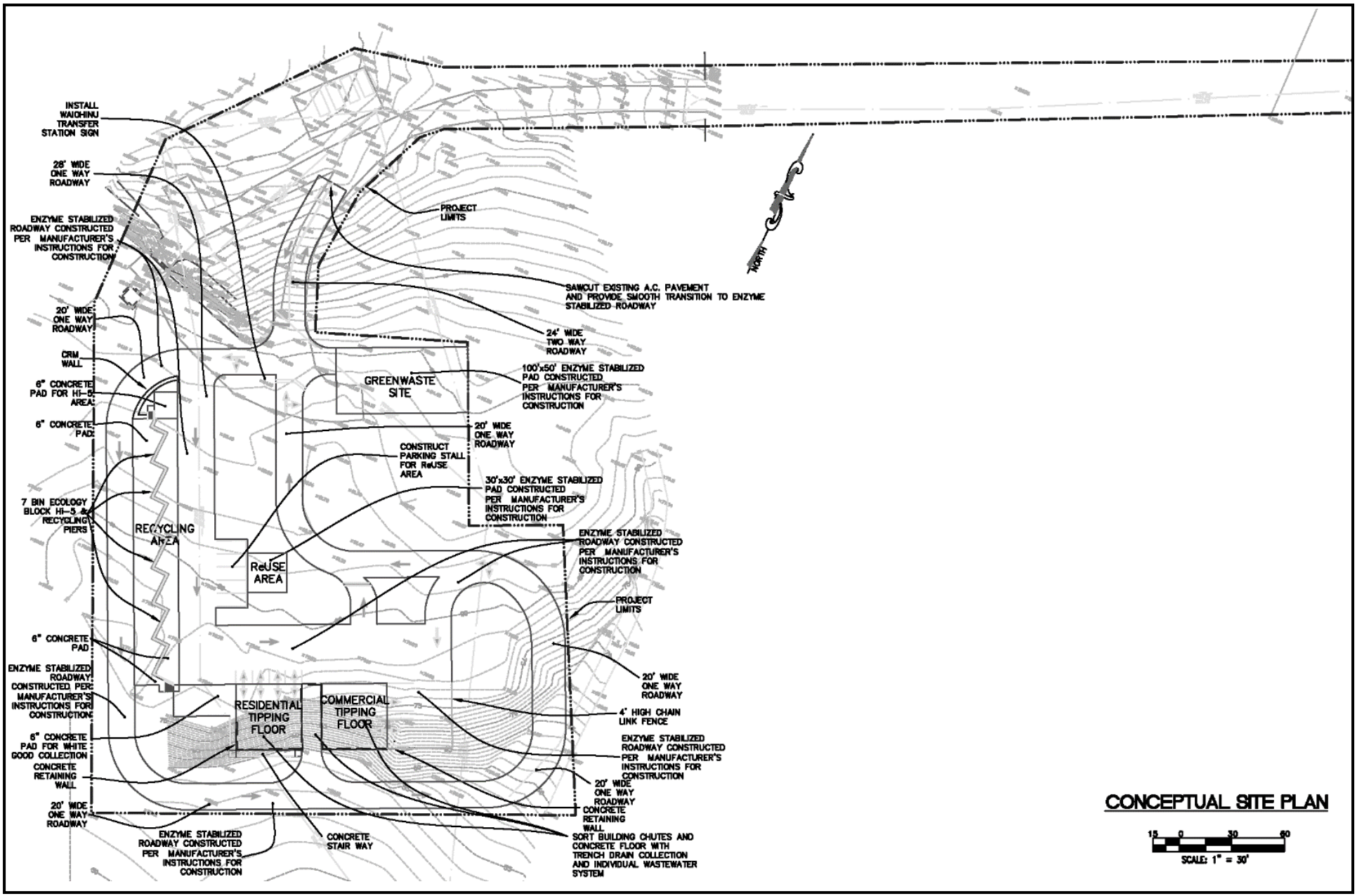

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FIGURE 2-1

CONCEPTUAL SITE PLAN

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENTS

NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

- HI-5 redemption area to be used by a contracted vendor;
- Future green waste area;
- Nets to Energy collection area; and
- Sort building with dedicated tipping floors for residential and future commercial solid waste.

An enhanced recycle bin area would be constructed using interlocking pre-cast concrete blocks with standard dimensions of approximately 2 feet wide by 2 feet high by 6 feet long. A reinforced concrete slab/apron would be provided at the top and bottom side of the pre-cast concrete blocks and would be able to withstand vehicle/container loads and impact loads to support recycling operations. A covered shelter made out of structural steel may also be provided. All other bin areas throughout the site may also have a weather protective shelter constructed out of structural steel.

A new trash sort building with dedicated tipping floors for residential and future commercial solid waste is also being proposed. The sort building would be a pre-fabricated metal building with a concrete floor top elevated approximately 15 feet above the refuse trailer floor and would be supported on three sides by a continuous reinforced concrete retaining wall. Trash would be deposited onto the concrete floor and compacted into trailers for hauling to the West Hawaiʻi Sanitary Landfill (WHSL). The sort building footprint would be approximately 40 feet wide by 80 feet long with a minimum side wall height of approximately 24 feet. One side of the building where trash is to be dropped off would be left open where pipe bollards would be used to protect the rigid frame on both the front and sides. The east end of the building would also be open with a chute that would be used to deposit trash into the 40-foot open top semi-trailers. The semi-trailers area would also be roofed to protect the semi-trailers from the elements. Water collection devices, such as trench drains, shall be installed for the collection of water in the truck storage area. The south and west sides of the building would be fully enclosed with screen vents at the top.

The proposed internal roadway design at the transfer station would feature stabilized soil paving and a one-way traffic flow pattern. Residential self-haulers and agency vehicles servicing the transfer station would be directed to separate travel routes upon entering the site to minimize conflicts and improve safety for users. Interaction between residential self-haulers and servicing agency vehicles would be limited to the ingress and egress points of the facility. Improvements in the vicinity of Kaulia Road would be limited to the minimum necessary to provide a smooth transition to the internal roadway on-site.

Other site improvements include construction of two (2) office trailers that would be used to support administrative functions. Utility improvements to support the office trailers would include extending service and providing new connections for potable water, electrical, and telecommunication services. An individual wastewater system (IWS) would also be provided to accommodate wastewater flows from the office trailers and leachate from the tipping floors. The IWS would consist of a septic tank and soil absorption system for treatment and disposal of wastewater effluent. A filtering, or pretreatment, system would be installed between the sort building and the septic tank for additional treatment of leachate.

Shallow drywells would be constructed as required to accommodate all development related storm water runoff.

In accordance with the regulations contained in HAR Chapter 11-58.1, DEM is in the process of renewing the existing SWMP that will include the acceptance of scrap metals and white goods in addition to the currently accepted waste streams. A portion of the site would also be reserved for the Nets to Energy program which would collect marine debris that would be used later to provide energy though an off-site combustion process. Areas for the collection of green waste and commercial solid waste may also be provided in the future and will be permitted through modification of the SWMP. In compliance with the conditions of the SWMP, project plans for the proposed project will be submitted to DOH for review and approval prior to construction. DEM will submit an application for permit renewal or modification at the appropriate time.

2.3 Project Costs and Schedule

Repairs and enhancements to the Waiʻōhinu Transfer Station are anticipated to cost approximately $4.5 million. Once regulatory approvals have been granted, it is estimated that construction would take another 2 years following the issuance of the notice to proceed. Improvements are anticipated to be phased based on the availability of funding.

3. DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

3.1 Climate

Hawaiʻi's climate is relatively uniform year round with mild temperatures, moderate humidity, and relatively consistent northeasterly trade winds. The dominant geological features of Hawaiʻi Island, namely Mauna Loa (13,679 foot summit elevation) and Mauna Kea (13,796 foot summit elevation), significantly influence the island's climate and weather conditions making Hawaiʻi Island home to 4 out of the 5 major climate zones and 8 out of the 13 sub-zones.

The project area is located within the summer dry sub-zone of the humid tropical climate zone found primarily in lowland areas straddling the windward and leeward sides of the islands. The tropical summer-dry zone has a very distinct summer dry season. Lacking regular trade winds, these areas receive very little mountain rainfall. Annual rainfall in Waiʻōhinu averages about 54 inches annually, with the winter months from October to April receiving the majority of the rainfall (Giambelluca et al., 2013). Temperatures are relatively uniform throughout the year with averages in Nāʻālehu ranging from a low of 61.5 degrees Fahrenheit in the winter months to a high of 84.5 degrees Fahrenheit in the summer months (DBEDT, 2018).

Changes in the Earth's climate over the last century due to human input of GHGs into the atmosphere are unprecedented. The concentration of carbon dioxide in the atmosphere is well outside the range of natural variability and is higher than it has ever been before. The rapid build-up of GHGs, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, from human activities, is causing global warming and climate disruption (Hawaiʻi Climate Change Mitigation and Adaptation Commission, 2017).

Slight increases in the average temperature of the Earth's surface have translated to widespread changes in weather patterns. Scientific studies indicate that extreme weather events such as heat waves and large storms are likely to become more frequent or more intense as the Earth's climate changes. Many islands are especially vulnerable to the risks of climate change because of their small size, low elevation, remote geographical location, and concentration of infrastructure along the coastlines (EPA, 2016).

Act 234, Session Laws of Hawaiʻi 2007, established the state's policy framework and requirements to address Hawaiʻi's GHG emissions. The purpose of the Act is to "reduce, by January 1, 2020 GHG emissions in the State to levels at or below the best estimations and updates of the inventory of greenhouse gas emissions estimates for 1990."

Impacts and Mitigation Measures

No direct or indirect impacts on climate are anticipated with implementation of the proposed project. The project will be appropriately designed in the context of the surrounding environment and would not affect temperatures, wind, or rainfall levels in the region.

Short-term construction activities associated with the project are expected to temporarily increase GHG emissions in the project area. Cumulatively, these

emissions are anticipated to have insignificant effects on regional or global climate due to the small scale of the project and the temporary nature of the activities.

In the long-term, GHG emissions in the project area are expected to slightly increase with the introduction of mulching activities associated with future green waste disposal. Residents currently self-haul green waste from their private residential property to the County of Hawaiʻi transfer station and convenience center green waste collection bins. The nearest transfer stations to Waiʻōhinu accepting green waste are the Volcano Recycling & Transfer Station located approximately 42 miles away in the northeast and the Keʻei Recycling & Transfer Station located approximately 44 miles away in the northwest. It is anticipated that GHG emissions would be partially offset by a reduction in the number of vehicle miles traveled by residents who currently self-haul green waste to far away green waste collection bins. Emissions would also be minimized by limiting mulching activities, which are proposed to occur on an intermittent basis. As such, any potential cumulative impacts on climate are anticipated to be negligible.

3.2 Physiography

3.2.1 Geology and Topography

Hawaiʻi Island is the youngest and largest island in the Hawaiian chain. The island was formed by the coalescence of five volcanoes—Kohala, Hualālai, Mauna Kea, Mauna Loa, and Kīlauea. Only Mauna Loa and Kīlauea are presently considered active while the other three are considered dormant.

Waiʻōhinu was created by Mauna Loa lava flows from various eruptions dating back between 3,000 to 5,000 years ago (Wolfe and Morris, 1996). Flows are typically 5 to 20 feet thick. Due to its relatively young age, the underlying Kaʻū Basalt in the project area is generally unweathered and has developed only a thin soil layer. These basalt layers are typically highly fractured resulting in high permeability. A 2008 geotechnical study of the project area indicated that the project area is generally blanketed by a surface fill layer consisting of grayish brown sandy gravel and brownish gray cobbles with gravel ranging in thickness from about 1.5 to 11 feet. Basalt formation was encountered at depths ranging between about 1.5 feet below the existing grade to about 11.5 feet below the existing grade.

The project area has a maximum elevation of approximately 105 feet at its northern limits and generally slopes down in the southeastern direction to an elevation of about 50 feet. Average slopes at the site vary with the greatest slopes located in the lower portion of the project area.

Impacts and Mitigation Measures

No direct, indirect or cumulative impacts on geology are anticipated with implementation of the proposed project. The project will be designed and constructed in accordance with the recommendations of the 2008 geotechnical study.

Construction of the proposed project would involve land disturbing activities, such as clearing and grading for the stabilized access road, office trailers, sort building, and the various collection areas. These activities would slightly alter the existing

topography within the project area. Impacts to topography are anticipated to be minimal as much of the project area has been previously disturbed. Additionally, any excavated areas would be backfilled after construction to restore the topography similar to existing conditions.

A drainage study would be performed to assess any potential changes in drainage patterns. All development generated runoff would be retained on-site where it would be directed to shallow drywells that would allow water to slowly percolate into the ground. The new shallow drywells would be sized based on the final surface area that would be contributing storm water runoff from the design storm event. The final drainage system design will be coordinated with the County of Hawaiʻi Department of Public Works (DPW) prior to construction.

3.2.2 Soils

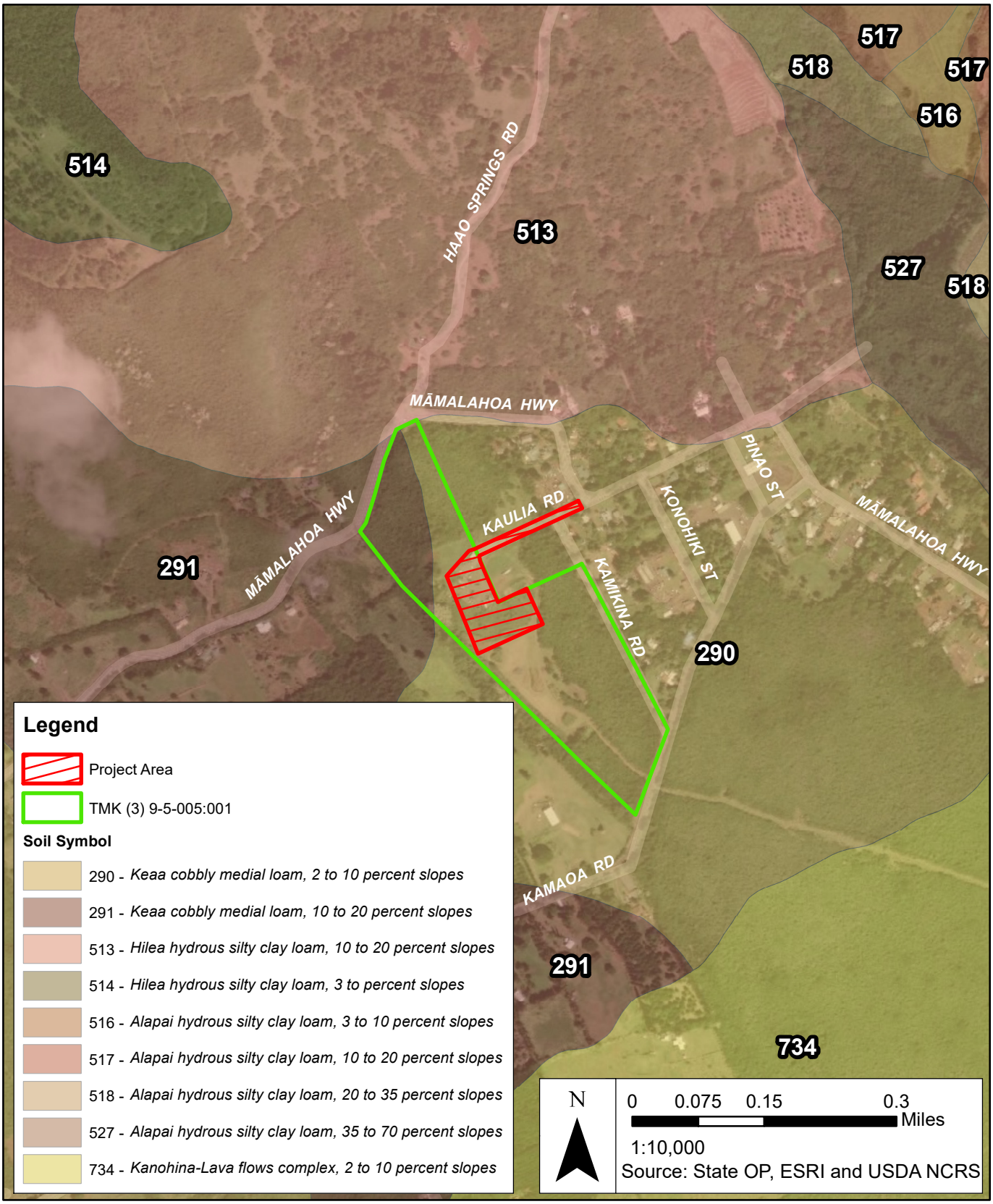
According to the Web Soil Survey managed by the U.S. Department of Agriculture National Resources Conservation Service (NRCS), soils within the project area consist entirely of Keaa Cobbly Medial Loam, 2-10% slopes (see Figure 3-1). This soil series consists of shallow, well-drained soils found in mid-elevations (1,000 to 3,500 feet) on windward slopes and the southwest rift zone of Mauna Loa Volcano (NCSS 2008). The soil is formed in basic volcanic ash over pāhoehoe lava found on only a small extent of Kaʻū near Waiʻōhinu. The soil type generally consists of approximately 10 to 20 inches of soil over basalt bedrock with approximately 35% to 60% gravel to cobble rock fragments (NCSS 2008). Keaa soils are well-drained, runoff is high to very high, and permeability is moderately rapid in soil and very slow in underlying bedrock. The soil is typically used for wildlife habitat and homesites, some areas are used for orchid crops. Natural vegetation on this soil type includes Christmasberry (*Schinus terebinthifolius*) and Guinea grass (*Urochloa maxima*) (NCSS 2008).

The State of Hawaiʻi Department of Agriculture's *Agricultural Lands of Importance to the State of Hawaiʻi (ALISH)* system of defining agricultural suitability classifies lands into four categories: Prime Lands, Unique Lands, Other Lands and Unclassified (residual). The project area is Unclassified.

The *Detailed Land Classification, Island of Hawaiʻi*, published by the University of Hawaiʻi, Land Study Bureau (LSB), evaluates the quality or productive capacity of certain lands on the island using a five-class productivity rating system, with "A" representing the class of the highest productivity and "E" the lowest. Under this system, the project area is rated as "D" land (see Figure 3-2).

Impacts and Mitigation Measures

Construction of the proposed project would involve land disturbing activities, which could result in short-term soil erosion impacts. These activities would be mitigated by incorporating best management practices (BMP) and erosion control measures into the project plans and specifications. Specific measures may include, but are not limited to: revegetating or stabilizing disturbed areas of soil as soon as possible after working, minimizing disturbance of soil during periods of heavy rain, applying protective covers to soil and material stockpiles, and installing appropriate erosion and sedimentation control devices during construction. In addition, the project will comply with the requirements of Hawaiʻi County Code, Chapter 10, related to Erosion



WILSON OKAMOTO CORPORATION

FIGURE 3-1

SOILS MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

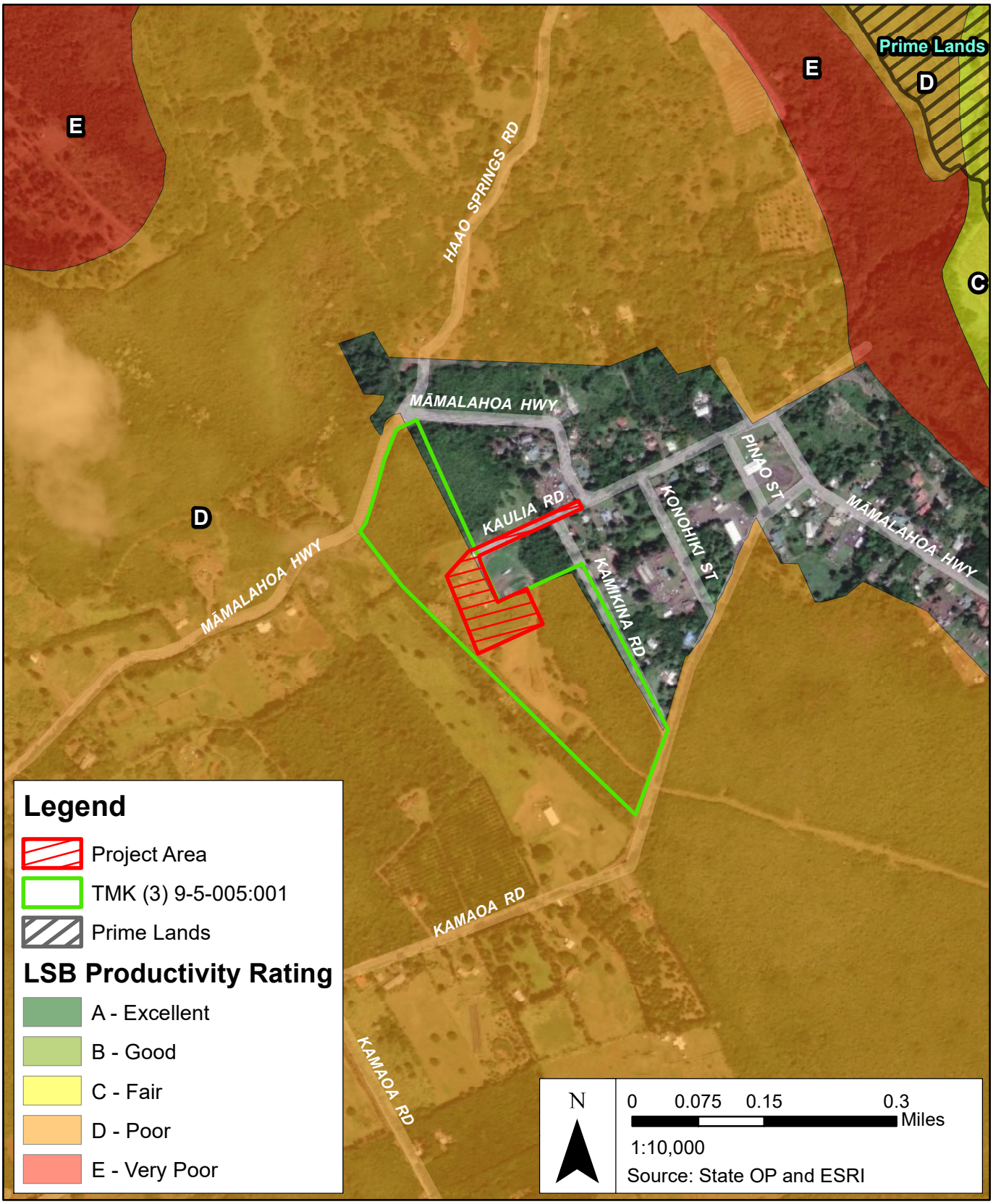


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FIGURE 3-2

AGRICULTURAL LANDS OF IMPORTANCE TO THE STATE OF HAWAII

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

and Sedimentation Control. Following construction, exposed soils in the project area would be paved over, stabilized, or re-vegetated to control erosion. Soil erosion impacts would also be mitigated through coordination with the appropriate agencies during permitting and construction. A National Pollutant Discharge Elimination System (NPDES) permit for storm water runoff from construction activities will be required as individual and/or cumulative soil disturbances in the project area will exceed one acre of land area. Any discharges related to project construction or operation activities will comply with applicable State Water Quality Standards as specified in Hawaiʻi Administrative Rules (HAR), Chapter 11-54 Water Quality Standards and HAR, Chapter 11-55 Water Pollution Control, Department of Health.

Given the low productivity potential of the soil in the area and need for high inputs, the project area is not considered suitable for agricultural activity. Therefore, implementation of the proposed project would not reduce the inventory of productive lands available for agricultural uses.

3.3 Hydrology

3.3.1 Groundwater

Due to the relatively young and porous geology of Hawaiʻi Island, most of the rainfall infiltrates to groundwater. The State of Hawaiʻi has classified groundwater under an aquifer coding system to identify and describe groundwater aquifers. The project area overlies the Southeast Mauna Loa Aquifer Sector of the Ka Lae Aquifer System. The sustainable yield of an aquifer is the amount of groundwater that can be pumped without depleting the source; the Ka Lae Aquifer System has a sustainable yield of 31 million gallons per day (MGD).

HAR, Section 11-23.4 provides criteria for classifying aquifers into those that are designated as underground sources of drinking water and those that are not. The boundary between non-drinking water aquifers and underground sources of drinking water is generally referred to as the underground injection control (UIC) line. The project area is well above (mauka) the UIC line, which means that the underlying aquifer is considered a drinking water source.

Impacts and Mitigation Measures

No impacts on groundwater resources associated with the project area are anticipated with construction or operation of the proposed project. Proposed activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater. The proposed IWS would feature a septic tank and soil absorption system that would treat any wastewater produced on-site. After primary treatment in the septic tank, the effluent would be distributed to the subsurface soil absorption bed where it would be naturally treated and filtered by the soil. Construction material wastes would be appropriately disposed of to prevent leaching.

3.3.2 Surface Water

Background research indicates Waiʻōhinu was traditionally a fertile land with permanently flowing streams fed by natural spring sources. Due to the displacement of streams by the frequent lava flows it is noted that “there is no stream in the Kau District that flows in a channel of its own making over 10 feet deep” (Stearns and Clark, 1930).

The Wai‘ōhinu Stream, a non-perennial stream fed by spring sources, formerly ran through the Wai‘ōhinu community but has since been historically diverted. The current project area is approximately 0.5 miles (0.8 km) to the west of Wai‘ōhinu Stream.

There are no delineated or proposed wetlands in the project area and there are no direct hydrologic connections between the Wai‘ōhinu Transfer Station and nearby surface waters.

Impacts and Mitigation Measures

No direct, indirect or cumulative impacts on surface waters in the project area are anticipated with construction and operation of the proposed project as there are no surface water features such as rivers, streams, lakes, ponds, or wetlands in or within proximity of the project area.

During construction, soil erosion impacts would be mitigated by incorporating BMPs and erosion control measures into the project plans and specifications. Specific measures may include, but are not limited to: revegetating or stabilizing disturbed areas of soil as soon as possible after working, minimizing disturbance of soil during periods of heavy rain, applying protective covers to soil and material stockpiles, and installing appropriate erosion and sedimentation control devices during construction. In addition, the project would comply with the requirements of Hawai‘i County Code, Chapter 10, related to Erosion and Sedimentation Control. Following construction, exposed soils in the project area would be paved over, stabilized, or re-vegetated to control erosion.

Soil erosion impacts would also be mitigated through coordination with the appropriate agencies during permitting and construction. A NPDES permit for storm water runoff from construction activities will be required as individual and/or cumulative soil disturbances in the project area will exceed one acre of land area. Any discharges related to project construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54 Water Quality Standards and HAR, Chapter 11-55 Water Pollution Control, Department of Health.

Post-construction, all development generated runoff would be retained on-site where it would be directed to shallow drywells that would allow water to slowly percolate into the ground. The new shallow drywells would be sized based on the final surface area that would be contributing storm water runoff from the design storm event. The final drainage system design will be coordinated with DPW prior to construction.

3.4 Natural Hazards

3.4.1 Flood and Tsunami Hazard

According to the Flood Insurance Rate Map (FIRM) Panel Number 1551661925F, prepared by the Federal Emergency Management Agency (FEMA), the Wai‘ōhinu Transfer Station along with much of the surrounding area is designated as Zone X—an area determined to be outside of the 500-year flood plain (see Figure 3-3).

WILSON OKAMOTO CORPORATION

FIGURE 3-3

FLOOD INSURANCE RATE MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

According to the Tsunami Evacuation Zone maps for Hawaiʻi Island, the Waiʻōhinu Transfer Station is located outside of the tsunami evacuation zone.

Impacts and Mitigation Measures

No direct, indirect or cumulative impacts on flood and tsunami hazards are anticipated as the proposed project is not anticipated to increase flood risks or cause any adverse flood-related impacts within the project area or lower elevation properties. The project involves construction of a stabilized access road, office trailers, sort building, and concrete pads for various collection areas. All development generated runoff would be retained on-site where it would be directed to shallow drywells that would allow water to slowly percolate into the ground. The new shallow drywells would be sized based on the final surface area that would be contributing storm water runoff from the design storm event. The final drainage system design will be coordinated with DPW prior to construction.

3.4.2 Hurricane

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. During hurricanes and storm conditions, high winds cause strong uplift forces on structures, particularly on roofs. Wind-driven materials and debris can attain high velocity and cause devastating property damage and harm to life and limb. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events would occur. While the Island of Hawaiʻi has not been in the direct path of a hurricane since recordation began in 1950, the models indicate that the island has a long-term hurricane hazard risk higher than any of the other islands for a direct hit.

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on hurricane hazard are anticipated with implementation of the proposed project. The project will be designed in consideration of the potential hazards posed by hurricanes. The potential for hurricanes, while relatively rare, is present. Irrespective of any mitigation measures taken, the unpredictable and sometimes destructive nature of hurricanes ultimately limits the extent of practical measures that can be taken to avoid hurricane impacts. As such, no additional mitigation measures are proposed or anticipated to be required.

3.4.3 Volcanic Hazard

The island of Hawaiʻi is divided into 9 lava flow hazard zones, with lava flows most likely to occur in Zone 1 and least likely to occur in Zone 9. The zones are primarily based on the location of active vents, location and frequency of both historic and prehistoric eruptions, and larger topographic features that would affect the paths of future flows. The hazard boundaries are approximate, and the change in the degree of hazard is generally gradual rather than abrupt.

Waiʻōhinu Transfer Station is situated approximately 32 miles from Kīlauea Volcano, the nearest active vent. According to the USGS hazard classification, the entire project area is contained in lava-flow hazard Zone 6—areas on Mauna Loa protected by topography. See Figure 3-4.

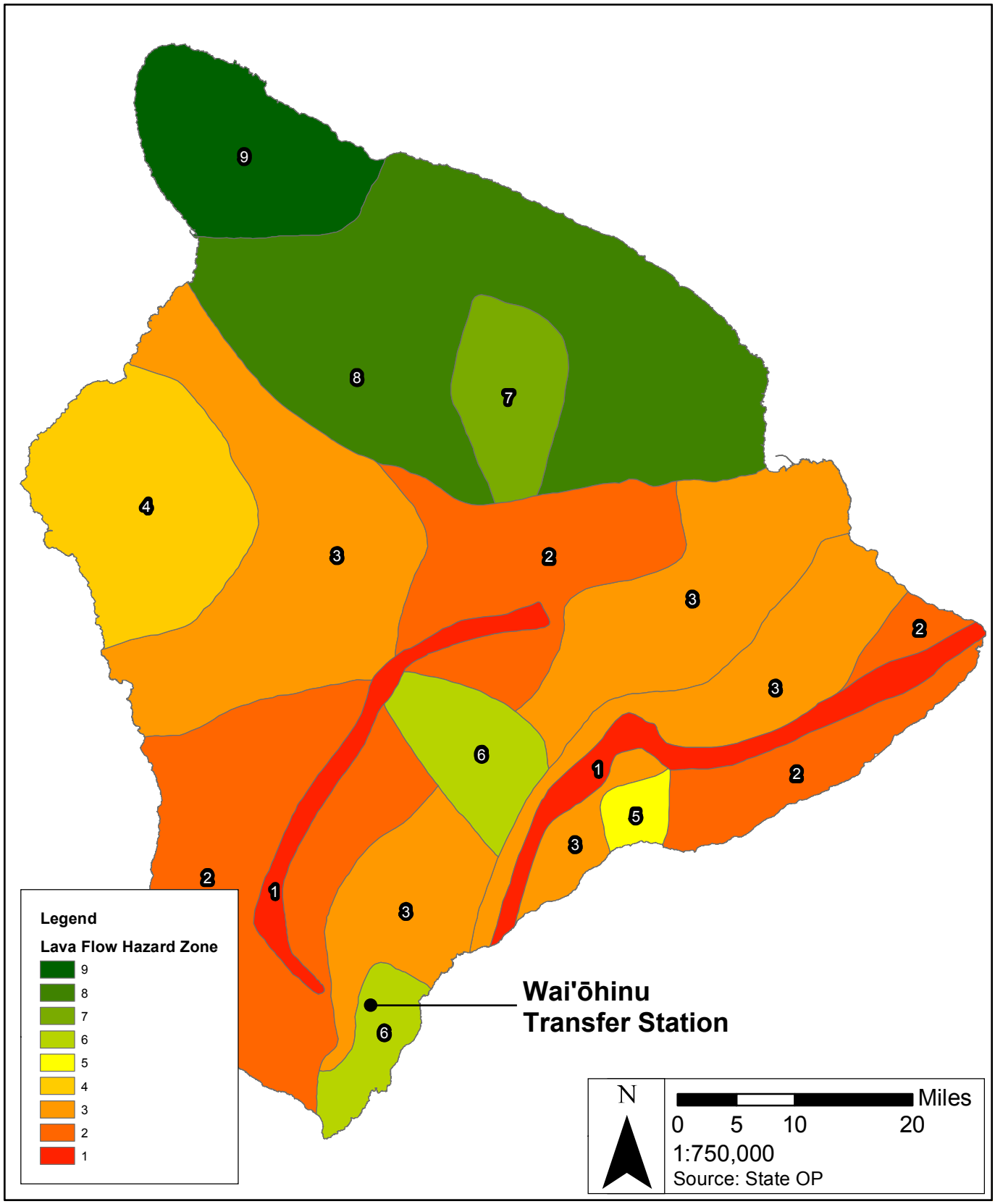

FIGURE 3-4

LAVA FLOW HAZARD ZONES - HAWAI'I ISLAND

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

WILSON OKAMOTO CORPORATION

Impacts and Mitigation Measures

The project area is at a low risk for lava flow hazard due to topography. Proposed improvements would not significantly alter the topography or decrease proximity to make the landfill more susceptible to volcanic hazards. Given the destructive nature of lava flows, there are no practical measures to avoid impacts from lava flows. However, Hawaiian lava flows generally advance slowly and can be easily avoided by people. No mitigation measures are proposed or anticipated to be required.

3.4.4 Seismic Hazard

The entire island of Hawaiʻi is rated Zone 4 Seismic Probability Rating (Uniform Building Code, Appendix Chapter 25, Section 2518). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

The largest earthquake recorded in the history of Hawaiʻi Island happened on April 2, 1968 when a severe earthquake shook the Waiʻōhinu Fault which runs approximately half a mile from Waiʻōhinu southeast to Waikapuna Bay (Stearns and Clark, 1930). The quake is said to have destroyed every building in Waiʻōhinu and caused widespread destruction throughout Kaʻū. It is estimated the earthquake had a magnitude of 7.9 on the Richter magnitude scale and a maximum Mercalli intensity of X (Extreme). None of the several earthquakes of Richter magnitude 6.0 or greater that have occurred on the island since 1950 have caused substantial damage to well-engineered roads, bridges or other roadway structures. This is due in part to the lack of unconsolidated sediments in the local substrate.

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on seismic hazards are anticipated with implementation of the proposed project. The project will be designed to comply with the Building Code for the County of Hawaiʻi.

3.4.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

No known hazardous substances are present within the project area. The documented historic use of the site and its surroundings, confirmed by visual surveys, did not reveal any structures, equipment, or storage containers that indicate hazardous material use. Therefore, based upon prior and present use of the project area, no hazardous substances, toxic wastes, or hazardous conditions are expected to be present on-site.

County of Hawaiʻi transfer stations and convenience centers do not accept hazardous materials in excess of reportable quantities, including household hazardous waste materials such as paints, pesticides, and car batteries, or biological hazards such as animal carcasses. The potential exists for illegal dumping of hazardous waste, both within the household waste disposal chutes during operational hours and on the access road to the transfer station during non-operational hours.

Impacts and Mitigation Measures

Construction or demolition activities for this project are not anticipated to involve asbestos; however, the Asbestos Abatement Office in the Indoor and Radiological Health Branch will be contacted prior to the start of construction should these conditions change.

DEM would employ several strategies to discourage illegally disposed hazardous materials and prompt cleanup when necessary:

- A DEM employee or security guard would be present at the transfer station during open hours to deter and prevent users from dumping hazardous materials into transfer station disposal chutes.
- Illegal dumping outside of the transfer station during closed hours would be discouraged by gating the access road as close to its intersection with main roadways as permitted, and lighting the facilities at night, in order to increase visibility of this area.
- Cleanup of the transfer station access road would continue to be part of routine maintenance activities by DEM.
- DEM plans to conduct periodic collections of household hazardous waste, encouraging proper disposal of these items. Household hazardous waste collection would require the presence of personnel with 40-hour Hazardous Safety Training Certified (HAZWPR 40) training, as well as provision of spill kits. Preparation for hazardous material releases, including large vehicle fluid spills, shall be addressed in an Emergency Management Plan.
- Community watch organizations would be welcomed to include the Waiʻōhinu Transfer Station in their watch areas.

3.5 Natural Environment

3.5.1 Flora

A natural resources assessment for improvements to the Waiʻōhinu Transfer Station was prepared by AECOS, Inc. on March 3, 2020 (see Appendix C). The assessment included a pedestrian survey of the project area, which revealed that vegetation across the site consists entirely of ruderal, weedy growth of mostly herbaceous plants. A few shrubs and small trees occur around the perimeter beyond the area of active grounds clearing/maintenance, but this border is mostly tall grass, predominantly Guinea grass (*Megathyrsus maximus)*.

Of the 59 plant species recorded during the survey, 56 were non-native, naturalized plant species. The remainder consisted of a single Polynesian introduction (planted *ti* or *Cordyline fruticosa)* and two indigenous (native) species (*ʻilima* or *Sida fallax* and *Cyperus polystachyos)*, which are common species.

Impacts and Mitigation Measures

No adverse impacts on vegetation resulting from construction of the project is anticipated as no plants of conservation concern or plants listed as threatened or endangered were noted in the survey and, given the highly disturbed nature of the site, would not be expected to be growing in the project area. Moreover, no federally designated Critical Habitat occurs in the project area and no natural resources of preservation or conservation concern occur in the project area. Biosecurity protocols as recommended by the U.S. Fish and Wildlife Service (USFWS) would be implemented during construction and incorporated into operations to prevent the introduction and spread of harmful invasive species on the island of Hawaiʻi.

3.5.2 Fauna

The natural resources assessment for improvements to the Waiʻōhinu Transfer Station prepared by AECOS, Inc. on March 3, 2020 (see Appendix C) also included a survey of extant birds and mammals in the project area. A total of 40 individual birds of 9 species, representing 8 separate families, was recorded during the point count. All of the avian species detected are alien to the Hawaiian Islands. Two established, introduced species—Common Myna (*Acridotheres tristis*) and Spotted Dove (*Streptopeilia chinensis*)—accounted for 50% of the total number of birds recorded. Only one terrestrial mammalian species was detected during the course of this survey. Numerous dogs (*Canis familiaris*) were heard barking in areas outside of the survey area.

All nine of the terrestrial bird species recorded are common established resident species found in lowland areas of the island of Hawaiʻi. No species currently listed or proposed for listing as threatened or endangered under federal or state endangered species statutes is associated with the project area (HDLNR, 2015; USFWS, nd).

Although no rodents were recorded on either survey it is likely that one or more of the four established alien Muridae found on Hawaiʻi—roof rat (*Rattus rattus*), brown rat (*R. norvegicus*), Polynesian rat (*R. exulans hawaiiensis*), and European house mouse (*Mus musculus*)—use various resources within the general project area on a seasonal basis. It is highly likely that both cat (*Felis catus*) and small Indian mongoose (*Herpestes javanicus*) also use resources within the Waiʻōhinu Transfer Station as they are both human commensal species. All of these introduced mammals are deleterious to native ecosystems and the native fauna dependent on them.

Several insects are now listed as endangered in the Hawaiian Islands: specifically seven species of the yellow-faced bee (*Hylaeus anthracinus*, *H. assimulans*, *H. facilis*, *H. hilaris*, *H. kuakea*, *H. longiceps*, and *H. mana*; USFWS, 2016) and Blackburn's sphinx moth (*Manduca blackburnii*; USFWS, 2000). No individual yellow-faced bee species was observed during the survey and no potential habitat or food sources were noted. The caterpillar of the sphinx moth feeds exclusively on plants in the Family Solanaceae. In particular, where the moth is found, caterpillars are most often associated with the widely distributed, non-native tree tobacco plant (*Nicotiana glauca*). The only plant present representing the Family Solanaceae was a single wild cherry tomato plant (*Solanum lycopersicum* var. *cerasiforme*). This species is not known to be used by the caterpillar. We would deem any threat to these species due to project activities as non-existent.

By letter dated February 5, 2020, USFWS indicated that there are six listed animal species with the potential to occur in the immediate vicinity of the project area: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot (*Fulica alai*).

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, 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.

Additionally, Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing. The field survey of the project area found that it is possible that Hawaiian hoary bat or *ʻōpeʻapeʻa* (*Lasiurus cinereus semotus*) uses resources within the project vicinity on a seasonal basis. The principal potential impact that improvements to the site might pose to bats is clearing and grubbing of tall vegetation. However, since no trees are present in the project area, displacement of individual bats using a tree as a roosting location would not occur.

The Hawaiian petrel, Newell's shearwater, and band-rumped storm petrel (referred to collectively herein as Hawaiian seabirds) may traverse the project area at night during the breeding, nesting and fledging seasons (September 15 to December 15). Outdoor lighting could 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 they 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.

The federally listed Hawaiian stilt and Hawaiian coot (referred to collectively herein as Hawaiian waterbirds) are found in fresh and brackish-water marshes and natural or man-made ponds. 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.

The Hawaiian hawk or ʻio (*Buteo solitaries*) also has the potential to occur in the vicinity of the project area. While the Hawaiian hawk was recently removed from the federal list of threatened and endangered species it continues to be State-listed as endangered under HRS Chapter 195-D. The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the island of Hawaiʻi. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

No streams or wetlands or other aquatic habitat is present in or near the project area.

Impacts and Mitigation Measures

The proposed project would not have an adverse impact on threatened or endangered species or native fauna in the project area. Although the proposed IWS would feature a soil absorption bed that would be used to naturally treat wastewater effluent, the soil absorption bed would be located below ground and is not anticipated to result in standing water or the creation of open surface water at the site that could attract listed Hawaiian waterbirds. Other listed species of fauna could potentially traverse the project area, but tend not to frequent the Waiʻōhinu Transfer Station due to use of the site for solid waste disposal activities. The contractor would be responsible for adhering to project plans and specifications which would incorporate the following avoidance and impact minimization measures, as applicable:

- To avoid impacts to Hawaiian hawks, construction activities should avoid brush and tree clearing during their breeding season (March through September). If the project area must be cleared during the Hawaiian hawk breeding season, a biologist familiar with the species should conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities. Pre-disturbance surveys for Hawaiian hawk are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, another survey should be conducted. No clearing of vegetation or construction activities should occur within 1,600 feet of any Hawaiian hawk nest during the breeding season until the young have fledged. Regardless of the time of year, no trimming or cutting trees containing a Hawaiian hawk nest is allowed, as nests may be re-used during consecutive breeding seasons.

- To avoid impacts to the Hawaiian hoary bat, it is recommended that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season (June 1 to September 15). It is further recommended that barbed wire not be used for fencing to protect low-flying, foraging bats.

- Avoid or minimize use of artificial lighting and avoid night work if possible. If artificial illumination must be used, it should be shielded so the bulb is not visible at or above bulb-height. Automatic motion sensor switches and controls should be installed on all outdoor lights or outdoor lights should be turned off when human activity is not occurring in the lighted area. If night work must be conducted, it should take place outside the sea bird fledging season (September 15 through December 15) to the extent practicable and should utilize shielded lighting.

- Post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site in areas where waterbirds are known to be present. If water resources are located within or adjacent to the project area, incorporate applicable BMPs regarding work in aquatic environments into the project design. Where appropriate habitat occurs within the vicinity of the proposed project, a biological monitor should conduct Hawaiian waterbird nest surveys within 3 days prior to project initiation and again after any subsequent delay of work of 3 or more days. If a nest or active brood is found:
    - Contact USFWS within 48 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
    - Have a biological monitor present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Potential impacts from construction activities, such as noise generated during construction, are not likely to adversely affect federally or State-listed threatened or endangered species with implementation of the foregoing avoidance and minimization measures. These construction activities are temporary in nature and would be similar in character and intensity to existing activities. Post-construction, all predator and vector control efforts would be conducted by licensed applicators and would conform to all federal and State application rules and conditions to avoid or minimize indirect impacts to listed endangered or threatened species.

3.6 Archaeological and Historical Resources

Wai‘ōhinu Transfer Station is in the Wai‘ōhinu Ahupua‘a of the Ka‘ū District, on the island of Hawai‘i. Background research indicates Wai‘ōhinu was traditionally a fertile land with permanently flowing streams fed by natural spring sources. During the Māhele in the mid-1800s, Wai‘ōhinu was retained as Crown Land by Kamehameha III. Wai‘ōhinu was devastated during the earthquakes and volcanic activities of 1868, in which historical accounts attest to many structures, including stone walls and thatched houses, being destroyed. Multiple sugar cane plantations operated within and near Wai‘ōhinu throughout the mid- to late- 1800s, with the last mill closing in 1996. Homestead Lots were plotted throughout Wai‘ōhinu with Lots 43-52 adjacent to the project area.

Wai‘ōhinu Transfer Station has been in operation since at least the 1970’s. Prior to its use as a County transfer station, the project area was used as an informal dumping grounds for the community. A Literature Review and Field Inspection (LRFI) prepared by Honua Consulting in March 2020 (see Appendix D), noted that a few archaeological studies have been conducted in the vicinity of the project area. Archaeological studies focused on a drainage improvement project approximately 1,811 feet (552 meters or 0.34 miles) feet to the northeast of the project, which documented a traditional Hawaiian shrine (SIHP #50-10-76-2600) and multiple historic sites and structures (SIHP #50-10-76-2601 to -2606) associated with early missionary and plantation activities. Another archaeological study was conducted approximately 1,657 feet (505 meters 0.31 miles) feet to the south of the project, which reported that a previous stone feature had existed however it was destroyed by rock removal and only foundation stones remained.

The field inspection conducted as part of the LRFI included a pedestrian survey of the project area. No cultural features or significant cultural artifacts were observed or documented. Based on the results of background research and the field survey, a project effect determination of “no historic properties affected” was recommended. However, no sub-surface archaeological investigations have been conducted on the property to assess the potential for cultural deposits to exist. Therefore, an archaeological monitoring program is recommended to be conducted in accordance with HAR 12-279 (Rules Governing Standards for Archaeological Monitoring Studies and Reports) to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the project.

Impacts and Mitigation Measures

Due to the extent of ground disturbance at the transfer station and seeing as no cultural, historic or archaeological sites appear to be present in the project area, it is anticipated that the proposed action would not adversely affect any historic

properties. Because the study area has been used for solid waste disposal activities even before the 1970's, it is also logical to conclude that the proposed construction would not impact any culturally valued resources or traditional cultural practices.

DEM and its contractors would be required to comply with all State and County rules and regulations regarding the preservation of archaeological and historic sites. The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately and the State Historic Preservation Division (SHPD) will be contacted, which will assess the significance of the find and recommend appropriate mitigation measures if necessary. DEM would also consult with SHPD in compliance with State historic preservation review requirements through the grading permit process to determine appropriate mitigation measures for the project.

3.7 Air Quality

The present ambient air quality in Waiʻōhinu is generally good.

Kīlauea Volcano continuously emits volcanic gases which result in emissions of over 1,000 tons of sulfur dioxide per day. This approximate level of output has persisted since 1986, and intermittently since 1983. Hawaiʻi's strong sunlight and moist air promote oxidation and hydration of sulfur dioxide to a sulfuric acid aerosol which is partially neutralized to ammonium sulfate. The combination of these aerosols, the remaining sulfur dioxide and other volcanic vapors are locally referred to as "vog," or volcanic fog. The rate of air emissions by Kīlauea may produce vog exposures along the plume trajectory which present chronic or acute public health hazards. Kīlauea's Puʻu ʻŌʻō vent is located approximately 40 miles northeast of the Waiʻōhinu Transfer Station.

The State of Hawaiʻi Department of Health (DOH), Clean Air Branch, monitors the ambient air quality in the State for various gaseous and particulate air pollutants. The EPA has set national ambient air quality standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), ozone (O_3), and particulate matter (PM_{10} and $PM_{2.5}$). Hawaiʻi has also established a state ambient air standard for hydrogen sulfide (H_2S) related to volcanic activity on Hawaiʻi Island. The primary purpose of the statewide monitoring network is to measure ambient air concentrations of these pollutants and ensure that these air quality standards are met.

Air pollution in Hawaiʻi is caused by many different man-made and natural sources. There are industrial sources of pollution, such as power plants and petroleum refineries; mobile sources, such as cars, trucks and buses; agricultural sources, such as previous sugar cane burning and natural sources, such as windblown dust and volcanic activity. The DOH Clean Air Branch is responsible for regulating and monitoring pollution sources to ensure that the levels of criteria pollutants remain well below the federal and State ambient air quality standards.

Air quality on the island of Hawaiʻi is affected by emissions from industrial sources, vehicles, and natural sources. The major industrial source for the island is oil-fired power plants, which

emit SO_2, nitrogen oxides, and particulate matter. Motor vehicles emit CO, nitrogen oxides and hydrocarbons (an ozone precursor), as well as smaller amounts of other pollutants including particulates. Also emitting SO_2 is the geothermal power plant Puna Geothermal Venture, which supplies about 10-20% of the island's electricity. However, Puna Geothermal Venture is currently non-operational due to the volcanic eruptions of 2018. Volcanic emissions of sulfur dioxide convert into particulate sulfate, which causes a volcanic haze (vog) to blanket the area during occasional episodes of southerly kona winds. Vog concentrations are primarily dependent on the amount of volcanic emissions, the distance from the source vents, and the wind direction and speed on a given day. When trade winds are absent, which occurs most often during the winter months, East Hawaiʻi, the entire island or the entire state can be impacted by vog.

The State maintains six air monitoring stations on the island of Hawaiʻi, one of which is located in Nāʻālehu. According to DOH ambient air quality data, the quality of air in the Nāʻālehu area is considered to be good. Northeasterly trade winds tend to disperse pollutants toward the mountains, decreasing the concentration of pollution above Nāʻālehu. However, the amount of particulates and other air pollutants can significantly increase during periods when the winds shift to a southwesterly direction. Air flow from this direction carrying vog can lead to an increase in pollution and a decrease in visibility.

Impacts and Mitigation Measures

Construction activities that occur near to existing residences, business, and public areas and major thoroughfares exacerbate potential dust concerns. Therefore, a dust control management plan will be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. Measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction will be incorporated into the project plans and specifications. These measures may include, but are not limited to, the following:

- Planning the different phases of construction, focusing on minimizing the amount of airborne, visible fugitive dust-generating materials and activities, centralizing on-site vehicular routes, and locating potential dust-generating equipment in areas of the least impact;
- Providing an adequate water source at the site prior to start-up of construction activities;
- Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Minimizing airborne, visible fugitive dust from shoulders and access roads;
- Providing reasonable dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- Controlling airborne, visible fugitive dust from debris being hauled away from the project site.

No significant impacts on air quality are anticipated as a result of the construction or operation of the proposed project. Construction activities must comply with the provisions of Hawaiʻi Administrative Rules, §11-60.1-33 on Fugitive Dust. Respective contractors would be responsible for adhering to air quality standards and minimizing air quality impacts during the various phases of construction. An air pollution control

permit may be required to operate certain construction equipment, such as crushers or generator sets, which may be used during construction. If required, the contractor will be responsible for obtaining an air pollution control permit from the Clean Air Branch and complying with all applicable conditions and requirements. Exhaust emissions from construction vehicles are anticipated to have negligible impacts on air quality in the project area as the emissions would be temporary in nature, relatively small, and readily dissipated.

In the long-term, GHG emissions in the project area are expected to slightly increase with the introduction of mulching activities associated with green waste disposal. It is anticipated that these emissions would be partially offset by a reduction in the number of vehicle miles traveled by residents who currently self-haul green waste to the Volcano Recycling & Transfer Station located approximately 42 miles away or to the Keʻei Recycling & Transfer Station located approximately 44 miles away. Emissions would also be minimized by limiting mulching activities, which are proposed to occur on an intermittent basis. As such, any potential cumulative impacts on air quality are anticipated to be negligible and would be mitigated by complying with the State DOH Administrative Rules, Title 11, Chapter 60 "Air Pollution Control" as applicable.

3.8 Noise & Odor

Ambient noise in the vicinity of the project area is predominantly attributed to the combined noise levels of truck traffic servicing the Waiʻōhinu Transfer Station, agricultural activities, and cars traveling along Māmalahoa Highway. Residences less than 1,000 feet or more away near the intersection of Kaulia Road and Kamikina Street are the nearest sensitive uses. At this distance, the landfill noise is perceptible but not a nuisance, and is blended in with agricultural and naturally occurring sounds. Therefore, existing noise impacts from the improvements at the Waiʻōhinu Transfer Station on sensitive receptors are modest.

Household waste is by nature malodorous, and some odor is unavoidable near household waste collection containers. Severe nuisance odors may arise, however, when users deposit certain prohibited materials into waste collection containers, including decaying animal carcasses and commercial food waste. Visits to County of Hawaiʻi transfer stations and convenience centers suggest that collection containers themselves are often not the main source of severe odors, the deposition of animal carcasses nearby being a more significant source.

Impacts and Mitigation Measures

Construction of the proposed project may result in short-term noise impacts on the surrounding environment. Noise generated by temporary construction activities would be similar in character and intensity to the existing noise conditions and is not anticipated to have an adverse effect on overall noise levels. Any potential impacts would be mitigated by complying with the State DOH Administrative Rules, Title 11, Chapter 46 "Community Noise Control" regulations.

In the long-term, proposed mulching activities would introduce a new source of noise to the project area. It is anticipated that the noise generated by mulching activities would be similar in character and intensity to existing noise generators in the project area and would be offset by a reduction in noise generated by truck traffic servicing

the Wai‘ōhinu Transfer Station with construction of the tipping floor within an enclosed structure. Potential impacts to sensitive receptors in the vicinity would be further mitigated by limiting hours of mulching activities to occur intermittently on weekdays within standard daytime work hours. The project is not anticipated to result in significant noise impacts in the long-term.

Nuisance odors can be effectively managed through several strategies. First, disposal of prohibited wastes in household waste collection containers can be minimized with the supervision of transfer station and convenience center attendants. After-hours gating of the facilities can also reduce this activity. While Wai‘ōhinu Transfer Station is currently gated during closed hours, dumping at the gated access roads does still occur. Prevention of illegal dumping at the gates during closed hours would discourage dumping of prohibited malodorous materials; strategies for this should include monitoring of the areas by community volunteers (i.e., neighborhood watch), lighting of the access roads, and placement of gates as close to major roadways as possible. Signage specifying allowed substances is an essential element in mitigation of nuisance odors.

Odors from household waste collection containers are mainly managed by routine removal; collection containers would be removed from the transfer station and transported to WHSL as they fill (probably daily and in no cases less than twice weekly), limiting decay of household waste on-site and thereby reducing odors. Additionally, buffers around the Wai‘ōhinu Transfer Station would minimize the potential for odors to impact nearby residents and motorists.

In summary, DEM would perform the following in order to minimize the potential for nuisance odors to impact nearby receptors:

- Trailers and bins will be changed frequently and transported to WHSL, as volume warrants, and in no case less frequently than twice a week;
- Adequate buffers will be maintained around the transfer station;
- The transfer station will be staffed, with the possible assistance of volunteers, in order to prevent the disposal of prohibited wastes in collection containers;
- The access roads will be gated during night time hours;
- Assistance with monitoring of the access roads by neighborhood watch will be solicited;
- Signage will advise users what wastes are prohibited and permitted; and
- Good housekeeping practices, including routine site cleaning, will be conducted.

3.9 Visual Resources

The Wai‘ōhinu Transfer Station is screened from view from Māmalahoa Highway by both vegetation and the natural topography of the area. At the site, line-of-sight views are generally unobstructed because of the relatively flat terrain, lack of structures, and undeveloped nature of the surrounding area. View planes of the Wai‘ōhinu Transfer Station

from residences in the agricultural lands in proximity to the transfer station are generally obstructed by foliage.

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on visual resources are anticipated with implementation of the proposed project. View planes of the Waiʻōhinu Transfer Station from the surrounding area is generally obstructed by dense vegetation that provides a visual barrier for the area. Construction of the proposed project would not significantly alter the existing massing. No mitigation measures are proposed or anticipated to be required.

3.10 Traffic

Waste streams currently accepted at the Waiʻōhinu Transfer Station include household solid waste, mixed recyclables and non-HI-5 glass, and electronic waste on a periodic basis. These items are brought to the facility by residential self-haulers from nearby communities, such as Waiʻōhinu, Nāʻālehu, and Discovery Harbour. A HI-5 Redemption Facility and a ReUse Center are also located and operated on-site. County of Hawaiʻi transfer trailers consolidate and bring municipal solid waste from the transfer station to WHSL for final disposal. Municipal solid waste from commercial haulers and other government agencies are brought directly to WHSL.

Access to the Waiʻōhinu Transfer Station is off Kaulia Road. Traffic in the project area is minimal and is generated primarily by nearby residents, residential self-haulers, and County trucks and contractor vehicles that service the transfer station. Residential self-haulers and County trailers currently use the same ingress and egress at the transfer station.

Impacts and Mitigation Measures

Temporary increases in traffic from construction activities are anticipated in the short-term. Due to the temporary nature of these activities, impacts are anticipated to be negligible. In the long-term, no increases in vehicular traffic are expected because the project involves an existing solid waste facility where traffic demand is expected to remain similar to existing conditions. Within the transfer station, existing traffic flow conditions would improve with the construction of stabilized access roads that would improve on-site circulation and enhance safety by providing separate internal routes for private vehicles and County or contractor vehicles.

3.11 Socioeconomic

The largest towns on the island are Hilo with a population of 43,263, Kailua-Kona with a population of 11,975, and Waimea with a population of 9,212. The project area is located within the Waiʻōhinu Census Designated Place (CDP). Demographic and other information was reviewed from the U.S. Census 2010 for the Waiʻōhinu CDP and the County of Hawaiʻi and is shown in Table 3-1.

Based upon the data shown on the table, Waiʻōhinu CDP has a slightly younger population than the County of Hawaiʻi. The median age of the population for Waiʻōhinu CDP was 35.5 versus 40.9 for the County.

By racial mix, the Waiʻōhinu CDP has a higher percentage of Asians (24.9%), Native Hawaiian and Other Pacific Islanders (23.5%), and individuals with two or more races (36.6%) than the County (22.2%, 12.1%, and 29.5%, respectively). These groups (Asians, Native Hawaiian and Other Pacific Islanders, and individuals with two or more races) make up the majority of the population. Individuals of Some Other Race also comprise a slightly lower proportion than the County as a whole, with 0.9% and 1.5%, respectively. In contrast, Waiʻōhinu CDP has a population of Whites (14.1%) that is less than half that of the County (33.7%).

According to the 2010 Census, Waiʻōhinu CDP has a similar housing occupancy rate, 80.8% to that of the County, 81.5%. Housing units in this region are occupied by more owners (55.1%) than renters (25.6%) consistent with County trends (66.0% and 34.0%, respectively). The 2010 median household income for Waiʻōhinu was $38,250, which is significantly lower than the County median household income of $54,996 and the national median household income of $49,445.

The island of Hawaiʻi is still a dominantly rural area, with great tracts of open space partly used for farms or ranches. Over most of the island, population is clustered within towns or villages, not widely dispersed, although some areas (particularly Puna) contain large, sprawling “agricultural” subdivisions with low population density. Many businesses and government functions are headquartered in Hilo, including the University of Hawaiʻi at Hilo. It is a major commercial center on the island of Hawaiʻi and supports several industrial and commercial districts. Hilo International Airport and the deep draft harbor anchor the major shipping center on the island.

The closing of Kaʻū Sugar in 1996 marked the end of the sugar plantation era on the Big Island. Today, County and State government, the University of Hawaiʻi at Hilo, several astronomy bases, and diversified agriculture anchor the economy. Ranching continues to be a major industry, with over $20 million in annual sales. East Hawaiʻi is noted for its lush tropical agriculture: anthurium, papaya, orchid, foliage, banana, and ginger, among others, as well as a growing potential for wood products.

Impacts and Mitigation Measures

No relocation of residences, businesses, community organizations or farms would occur because of the proposed project. The project would only enhance the existing transfer station improving the waste management services provided and the quality of life for residents in the area who would otherwise continue to have disposal restrictions.

Table 3-1
Demographic Characteristics

Subject	Waiʻōhinu CDP		County of Hawaiʻi	
	Number	Percent	Number	Percent
TOTAL POPULATION	213	100	185,079	100
AGE				
Under 5 years	16	7.5	11,845	6.4
5-17 years	49	23	30,435	16.4
18-64 years	117	54.9	115,965	62.7
65 years and over	31	14.6	26,834	14.5
Median age (years)	35.5	---	40.9	---
RACE				
White	30	14.1	62,348	33.7
Black or African American	0	0.0	1,020	0.6
American Indian and Alaska Native	0	0.0	869	0.5
Asian	53	24.9	41,050	22.2
Native Hawaiian and Other Pacific Islander	50	23.5	22,389	12.1
Some Other Race	2	0.9	2,868	1.5
Two or more races	78	36.6	54,535	29.5
TOTAL HOUSEHOLDS	63	100	67,096	100
HOUSEHOLDS (BY TYPE)				
Family households (families)	51	81.0	44,407	66.2
Married-couple family	38	60.3	31,834	47.4
With own children under 18 years	13	20.6	11,141	16.6
Female householder, no husband present	6	9.5	8,258	12.3
With own children under 18 years	3	4.8	4,054	6.0
Nonfamily household	12	19.0	22,689	33.8
Average household size	3.38	---	2.70	---
TOTAL HOUSING UNITS	78	100	82,324	100
HOUSING OCCUPANCY AND TENURE				
Occupied Units	63	80.8	67,096	81.5
By owner	43	55.1	44,271	66.0
By renter	20	25.6	22,825	34.0
Vacant Units	15	19.2	15,228	18.5

3.12 Public Services and Facilities

3.12.1 Police, Fire and Medical Services

Police protection in Waiʻōhinu is provided by the County of Hawaiʻi Police Department. The Waiʻōhinu Transfer Station is part of the Kaʻū District under the Area II Operations Bureau that covers the area between Kaulanamauna in the west and Keauhou Landing in the east. The area is served by the police station located on Māmalahoa Highway in Nāʻālehu, approximately 3.5 miles from the Waiʻōhinu Transfer Station.

Fire prevention and protection is provided by the Hawaiʻi County Fire Department. Fire Department personnel are also trained and certified Emergency Medical Technicians allowing them to respond to medical as well as fire emergencies. The Nāʻālehu Fire Station located on Māmalahoa Highway in Nāʻālehu, approximately 2.2 miles away, provides fire protection and suppression services in the Waiʻōhinu-Nāʻālehu area. Backup support is provided by the Discovery Harbour Volunteer Fire Station located in Discovery Harbour.

The nearest medical facility is Kaʻū Hospital located in Pāhala approximately 14.5 miles northeast of Waiʻōhinu. Kaʻū Hospital was built in 1971, replacing the last of the sugar plantation hospitals of the island of Hawaiʻi. It is the only inpatient medical facility in the Kaʻū District offering a 24/7 emergency department, inpatient medical and rehabilitation care, long-term care, adult day health, x-ray and lab services, in addition to the family practice rural health clinic.

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on police and medical services are anticipated with implementation of the proposed project. The project is not anticipated to affect traffic and/or public safety concerns. No mitigation measures are proposed or anticipated to be required.

Fires occasionally occur at County transfer stations and convenience centers. These fires are typically caused by the disposal of hot ashes and fireworks and are generally confined to the inside of collection containers. The Fire Stations along with the proposed water tank are adequate to deal with this hazard. Design considerations for the planned water tank, including placement and capacity, will be made in consultation with the Hawaiʻi Fire Department. Additionally, the proposed project will be required to comply with all applicable provisions of the Hawaiʻi State Fire Code, National Fire Protection Association 2006 version, with County of Hawaiʻi amendments as outlined in the letter from the Hawaiʻi Fire Department dated February 17, 2020 (see Appendix A).

3.12.2 Educational Facilities

The project area is located in the State Department of Education (DOE) Kaʻū-Keaʻau-Pāhoa Complex Area within the Hawaiʻi District. Two schools currently serve this district: Nāʻālehu Elementary and Kaʻū High & Pāhala Elementary.

Nāʻālehu Elementary School is the closest DOE facility located approximately 2.5 miles east of the project area. The school provides education to students from grades K to 6.

Kaʻū High & Pāhala Elementary School is located in Pāhala approximately 12 miles northeast of the project area. The school provides education to students from grades K to 12 in three distinct areas of the campus: Elementary (K-6), Middle School (7-8) and High School (9-12).

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on educational facilities are anticipated with implementation of the proposed project. The project would not generate new residents or introduce new school-aged children to the area. Therefore, no additional demands would be placed on DOE facilities. While the construction of the proposed project may generate some noise and fugitive dust, the closest public school, Nāʻālehu Elementary School, is located over two miles away. The distance and prominent trade wind conditions are anticipated to disperse any potential construction related impacts.

3.12.3 Recreational Facilities

Major recreational facilities in the Kaʻū region include the Hawaiʻi Volcanoes National Park and the Manukā State Wayside Park. Established in 1916, Hawaiʻi Volcanoes National Park is located about 34 miles northeast of Waiʻōhinu and is home to Nāhaku (Thurston Lava Tube), Halemaʻumaʻu Crater and Kīlauea, one of the world's most active volcanoes. About 14 miles west of Waiʻōhinu is the Manukā State Wayside Park. The park is 13.4 acres and features an arboretum and the Manukā Nature Trail, a two-mile nature hike through the adjacent Manukā Natural Area Reserve.

Waiʻōhinu is a small, rural community with limited recreational facilities in the immediate vicinity of the project area. Waiʻōhinu Park, managed by the County of Hawaiʻi Department of Parks and Recreation, is the closest recreational facility located approximately 0.65 miles east of the project area. The park offers large open space, a playground, gathering facilities, and a restroom. Other recreational facilities in nearby communities include Kahuku Park, Nāʻālehu Community Center, and Kaʻū District Gym & Pāhala Community Center.

Impacts and Mitigation Measures

No direct, indirect, or cumulative impacts on recreational facilities are anticipated with implementation of the proposed project. Additionally, the project is not a direct generator of new residents requiring recreational facilities. No mitigation measures are proposed or anticipated to be required.

3.13 Infrastructure and Utilities

3.13.1 Water and Wastewater Systems

The County of Hawaiʻi Department of Water Supply (DWS) has two water systems in the Southeast Mauna Loa Aquifer Sector. Water for Waiʻōhinu comes from the Waiʻōhinu-Nāʻālehu Water System, which was assumed by DWS after the closure of the sugar plantation. The system primarily depends on the New Mountain House Tunnel Spring and Hāʻao Spring for its supply. The Nāʻālehu Well supplements the tunnel and spring sources during dry weather. The service area is widespread, covering the communities of Waiʻōhinu, Nāʻālehu and South Point, spanning six services zones through two booster pump stations

and nine storage tanks. Areas not supplied by groundwater or surface water is assumed to be supplied by rainwater catchment.

There is an existing 5/8-inch water meter serving the property, which is limited to an average usage of 400 gallons per day. DWS provides potable water service to the project area through an existing 8-inch water main along Māmalahoa Highway. A Wai Puna water station, which is a spring fed, community water source, is located along the northern edge of Kaulia Road.

There are currently no wastewater generating uses at the site and, therefore, no existing wastewater systems.

Impacts and Mitigation Measures

A water storage tank would be installed to meet fire safety standards.

Estimated maximum daily water usage calculations, prepared by a professional engineer licensed in the State of Hawaiʻi, would be provided to the DWS for review for any additional water that may be required for the project. After review of the calculations, DWS would determine if the additional water is available, if a water commitment can be issued, a water commitment deposit amount, facilities charges due, water system improvements, and other conditions for final approval.

An individual wastewater treatment system, consisting of a septic system and soil absorption bed, would be installed for the treatment and disposal of domestic wastewater and any potential leachate from the tipping floor of the sort building. The septic system would be located at a low point of the site and would be constructed per septic and soil absorption bed standards for treating all wastewater from sinks, toilets, and any leachate. A pre-treatment system, such as an oil/water separator, and would be installed. The design will meet DOH requirements for wastewater systems under Chapter 11-62, HAR. The sort building would also likely have a sump and possibly a lift station associated with these improvements depending on the elevation.

3.13.2 Drainage System

There is no existing site drainage system on the subject property, which is mostly undeveloped. Runoff from rainfall currently sheet flows and percolates into the ground. Some ponding may occur at natural low points in the topography during and immediately after heavy rainstorm events. However, this water quickly infiltrates into the ground once heavy rains have subsided.

Impacts and Mitigation Measures

The proposed project involves construction of a new sort building, office trailers, and several concrete pads needed to support the various solid waste collection areas. Construction of impervious surfaces associated with these improvements is anticipated to minimally increase storm water runoff at the site. A drainage study will be performed to assess any potential changes in drainage patterns. All development generated runoff would be retained on-site where it would be directed to shallow drywells that would allow water to slowly percolate into the ground.

The new shallow drywells would be sized based on the final surface area that would be contributing storm water runoff from the design storm event. The final drainage system design will be coordinated with DPW prior to construction. No indirect or cumulative impacts on existing drainage conditions are anticipated with implementation of the proposed project.

Leachate that may be generated by solid waste on the tipping floor would be collected by a trench drain system that would convey the effluent to a pre-treatment system prior to entering the septic tank and soil absorption bed.

3.13.3 Electrical and Communication Systems

There are currently no existing electrical or wired communication systems at the Wai'ōhinu Transfer Station.

Impacts and Mitigation Measures

New electrical and telecommunication systems would be installed to service the proposed office trailers. Photo-voltaic powered systems would be considered where deemed feasible. No mitigation measures are proposed or anticipated to be required. DEM will continue to coordinate directly with utility providers to determine system capacity and request utility service.

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4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

This section discusses the relationship of the proposed project to State and County of Hawaiʻi land use plans, policies, and controls. Some of the land use plans, policies, and controls are in tabular form, and are addressed with text and/or by the following letter code:

S = Supportive, NS = Not Supportive, N/A = Not Applicable

4.1 State of Hawaiʻi Land Use Plans and Policies

4.1.1 Hawaiʻi State Plan

The Hawaiʻi State Plan, Chapter 226, Hawaiʻi Revised Statutes (HRS), as amended, provides goals, objectives, policies, and priorities for the State. The purpose of the Hawaiʻi State Plan is to set forth a plan that shall serve as a guide for the future long-range development of the State; identify the goals, objectives, policies, and priorities for the State; provide a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of federal, state, and county plans, policies, programs, projects, and regulatory activities; and to establish a system for plan formulation and program coordination to provide for an integration of all major state, and county activities. The State Plan is divided into three sections. Part 1 consists of the Overall Theme, Goals, Objectives and Policies. Part 2 is Planning Coordination and Implementation. Part 3 is the Priority Guidelines. Consistency of the proposed project with applicable goals, objectives and policies of Part 1 is discussed in Table 4-1, and an assessment of conformance with Part 3 is discussed in Table 4-2. Conformance with Part 2 of the State Plan was not assessed as it primarily covers internal government affairs.

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
§226-4 State goals. In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:			
(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaiʻi's present and future generations.	**X**		
(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.	**X**		
(3) Physical, social, and economic well-being, for individuals and families in Hawaiʻi, that nourishes a sense of community responsibility, of caring, and of participation in community life.	**X**		
Discussion: The proposed project would support the State of Hawaiʻi economy by repairing and enhancing an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities, ensure safety and regulatory compliance, and to reduce overall long-term maintenance and repair costs associated with continued operation of the transfer station. Specifically, the improvements would provide enhancements for various collection areas including a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; a future green waste area; a nets to energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste.			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
Solid waste transfer stations play an important role in a community's overall waste management system. The proposed project would reduce the amount of trips the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing their well-being and quality of life. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs. Improvements would also include site improvements such as construction of internal roadways, a drainage system, an individual wastewater system, and utilities which would be designed to avoid or minimize any potential environmental impacts the project would have on the surrounding area. The proposed project would aid in maintaining the desired physical environment for the region. Moreover, the proposed project is not a new use of the project site, as it has been a waste transfer station for over 50 years.			
§226-5 Objective and policies for population. (a) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter. 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 Hawaiʻi'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 Hawaiʻi'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 Hawaiʻi's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaiʻi's population.			**X**
(5) Encourage federal actions that will 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 project would support the objectives and policies of the State for population as it involves repairs and enhancements of an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the people in surrounding communities. Improvements to the transfer station ensures the community would continue to receive solid waste management services in a remote area in a manner that contributes to County waste diversion efforts.			
§226-6 Objectives and policies for the economy--in general. (a) Planning for the State's economy in general shall be directed toward achievement of the following objectives: (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaiʻi's people. (2) A steady 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.			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(b) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawaiʻi by residents and nonresidents of the State.			X
(2) Expand Hawaiʻi'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 Hawaiʻi as an attractive market for environmentally and socially sound investment activities that benefit Hawaiʻi's people.			X
(4) Transform and maintain Hawaiʻi 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 Hawaiʻi.			X
(6) Seek broader outlets for new or expanded Hawaiʻi business investments.			X
(7) Expand existing markets and penetrate new markets for Hawaiʻi's products and services.			X
(8) Assure that the basic economic needs of Hawaiʻi'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 Hawaiʻi'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 Hawaiʻi.			X
(13) Foster greater cooperation and coordination between the public and private sectors in developing Hawaiʻi'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 Hawaiʻi's workers.	X		
(16) Provide equal employment opportunities for all segments of Hawaiʻi's population through affirmative action and non-discrimination 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 Hawaiʻi's economy, particularly with respect to emerging industries in science and technology.			X
(19) Promote and protect intangible resources in Hawaiʻi, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.			X

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(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, potential growth industries in particular.			X
(21) Foster a business climate in Hawaiʻi- 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: The proposed project would provide construction jobs in the short-term which is consistent with objectives and policies of the State for the economy in general. Working conditions for construction employees, as well as employees associated with the operations of the Waiʻōhinu Transfer Station would be maintained through adherence to current standards.			
§226-7 Objectives and policies for the economy--agriculture. (a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives: (1) Viability of Hawaii's sugar and pineapple industries. (2) Growth and development of diversified agriculture throughout the State. (3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being To achieve the agriculture objectives, it shall be the policy of this State to:			
(1) Establish a clear direction for Hawaiʻi's agriculture through stakeholder commitment and advocacy.			X
(2) Encourage agriculture by making the best use of natural resources.			X
(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.			X
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			X
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaiʻi's economy.			X
(6) Seek the enactment and retention of federal and state legislation that benefits Hawaiʻi's agricultural industries.			X
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaiʻi's food producers and consumers in the State, nation, and world.			X
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.			X
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			X
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			X
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			X
(12) In addition to the State's priority on food, expand Hawaiʻi's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			X

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(13) Promote economically competitive activities that increase Hawaiʻi's agricultural self-sufficiency, including the increased purchase and use of Hawaii-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D‑104.			X
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture			X
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			X
(16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			X
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko iʻa, māla, and irrigated loʻi, and growth of traditional Hawaiian crops, such as kalo, ʻuala, and ʻulu.			X
(18) Increase and develop small-scale farms.			X
Discussion: The objectives and policies for the economy related to agriculture are not applicable to the proposed project.			
§226-8 Objective and policies for the economy--visitor industry. (a) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaiʻi's economy. (b) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawaiʻi's visitor attractions and facilities.			X
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaiʻi's people.			X
(3) Improve the quality of existing visitor destination areas by utilizing Hawaiʻi's strengths in science and technology.			X
(4) Encourage cooperation between the public and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			X
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaiʻi's people.			X
(6) Provide opportunities for Hawaiʻi's people to obtain job training and education that will allow for upward mobility within the visitor industry.			X
(7) Foster a recognition of the contribution of the visitor industry to Hawaiʻi's economy and the need to perpetuate the aloha spirit.			X
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaiʻi's cultures and values.			X
Discussion: The proposed project does not include facilities or improvements that would directly affect the visitor industry in this area of Hawaiʻi.			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
§226 9 Objective and policies for the economy--federal expenditures. (a) 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 Hawaiʻi's economy. (b) To achieve the federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of federal expenditures in Hawaiʻi that generates long-term government civilian employment.			**X**
(2) Promote Hawaii's supportive role in national defense, in a manner consistent with Hawaii'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 Hawaii's economy.			**X**
(3) Promote the development of federally supported activities in Hawaiʻi that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaiʻi's environment.	**X**		
(4) Increase opportunities for entry and advancement of Hawaiʻi's people into federal government service.			**X**
(5) Promote federal use of local commodities, services, and facilities available in Hawaiʻi.			**X**
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaiʻi.			**X**
(7) Pursue the return of federally controlled lands in Hawaiʻi 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 may include federal expenditures to support the proposed project. Adverse impacts to the environment would be minimized through repairs and enhancements to an existing transfer station. Construction related impacts would be minimized through implementation of best management practices and appropriate mitigation measures.			
§226-10 Objective and policies for the economy--potential growth and innovative activities. (a) Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaiʻi's economic base. (b) To achieve the potential growth activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaiʻi's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.			**X**
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaiʻi through the export of services or products or substitution of imported services or products.			**X**
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.			**X**

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.			**X**
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus.			**X**
(6) Expand Hawaiʻi's capacity to attract and service international programs and activities that generate employment for Hawaiʻi's people.			**X**
(7) Enhance and promote Hawaiʻi's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.			**X**
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, and underground resources and solid waste.			**X**
(9) Promote Hawaiʻi's geographic, environmental, social, and technological advantages to attract new economic activities into the State.			**X**
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawaiʻi's social, economic, physical, and environmental objectives.			**X**
(11) Increase research and the development of ocean related economic activities such as mining, food production, and scientific research.			**X**
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaiʻi's ability to attract and develop economic activities of benefit to Hawaiʻi.			**X**
(13) Foster a broader public recognition and understanding of the potential benefits of new, growth oriented industry in Hawaiʻi.			**X**
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.			**X**
(15) Increase research and development of businesses and services in the telecommunications and information industries.			**X**
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation			**X**
(17) Recognize and promote health care and health care information technology as growth industries.			**X**
Discussion: The objectives and policies of the State for the economy related to potential growth and innovative activities are not applicable to the proposed project.			
§226-10.5 Objectives and policies for the economy--information industry. (a) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaiʻi as a leader in broadband and wireless communications and applications in the Pacific Region. (b) To achieve the information industry objective, it shall be the policy of this State to:			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaiʻi and between Hawaiʻi and the world, and make high speed communication available to all residents and businesses in Hawaii			X
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaiʻi to accommodate future growth and innovation in Hawaii's economy.			X
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii.			X
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state.			X
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry.			X
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			X
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry.			X
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy.			X
(9) Assist in the promotion of Hawaiʻi as a broker, creator, and processor of information in the Pacific**.**			X
Discussion: The proposed project would require installation of telecommunication systems to support the proposed office trailer uses. However, these uses are limited to operations of the transfer station and would not affect the telecommunications and information technology industries.			
§226-11 Objectives and policies for the physical environment--land-based, shoreline, and marine resources. (a) The land-based, shoreline, and marine resources objectives are: (1) Prudent use of Hawaiʻi's land-based, shoreline, and marine resources. (2) Effective protection of Hawaiʻi's unique and fragile environmental resources. (b) 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 Hawaiʻi'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 environs 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

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaiʻi.	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 project is consistent with the objectives and policies for the physical environment related to land-based, shoreline, and marine resources. No rare or endangered plant and animal species and their habitats are occur within the project area. Any impacts to rare or endangered plant and animal species with the potential to occur within the project area would be mitigated through implementation of best management practices, incorporating appropriate mitigation measures into the project plans and specifications, and through adherence to County, State, and federal rules and regulations. The proposed project would indirectly promote effective protection of Hawaiʻi's unique and fragile environmental resources as there would be improved opportunities for the proper disposal of waste that would otherwise adversely affect our natural resources, such as ghost nets, which are abandoned, lost or discarded fishing nets that drift in the world's oceans and could potentially entangle sea birds, sea turtles, dolphins, fish, whales, and other sea creatures.			
§226-12 Objective and policies for the physical environment--scenic, natural beauty, and historic resources. (a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaiʻi's scenic assets, natural beauty, and multi-cultural/historical resources (b) 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 Hawaiʻi's ethnic and cultural heritage.			X
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			X
Discussion: The objectives and policies for the physical environment related to scenic, natural beauty, and historic resources are not applicable to the proposed project. However, the proposed project would indirectly enhance Hawaiʻi's scenic assets, natural beauty, and multi-cultural/historical resources as there would be improved opportunities for the proper disposal of waste that would other affect the quality of these resources.			
§226-13 Objectives and policies for the physical environment--land, air, and water quality. (a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives: (1) Maintenance and pursuit of improved quality in Hawaiʻi's land, air, and water resources. (2) Greater public awareness and appreciation of Hawaiʻi's environmental resources. (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(1) Foster educational activities that promote a better understanding of Hawaiʻi's limited environmental resources.			X
(2) Promote the proper management of Hawaiʻi's land and water resources.			X
(3) Promote effective measures to achieve desired quality in Hawaiʻi'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 Hawaiʻi'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 Hawaiʻi'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 Hawaiʻi's people, their cultures and visitors.			X
Discussion: The proposed project is consistent with the objectives and policies for the physical environment related to land, air, and water quality. The project involves repairs and enhancements to an existing transfer station. Temporary impacts related to vehicle emissions associated with construction activities is anticipated to be minimal and temporary in nature. Air quality impacts related to fugitive dust will be mitigated through implementation of BMPs and adherence to federal, State, and County rules and regulations. No water quality impacts are anticipated with implementation of the proposed project as there are no surface waters in the vicinity of the Waiʻōhinu Transfer Station. Noise generated by temporary construction activities would be similar in character and intensity to existing noise conditions and is not anticipated to have an adverse effect to overall noise levels. In the long-term, mulching activities would introduce a new source of noise to the project area. It is anticipated that the noise generated by mulching activities would be similar in character and intensity to existing noise generators in the project area and would be offset by a reduction in noise generated by truck traffic servicing the Waiʻōhinu Transfer Station with construction of the tipping floor within an enclosed structure. Potential impacts to sensitive receptors in the vicinity would be further mitigated by limiting hours of mulching activities to occur intermittently on weekdays within standard daytime work hours. The project is not anticipated to result in significant noise impacts in the long-term. The proposed project can indirectly promote the maintenance and pursuit of improved quality in Hawaiʻi's land, air, and water resources as there would be improved opportunities for the proper disposal of waste that would otherwise affect the quality of these resources.			
§226-14 Objective and policies for facility systems--in general. (a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. (b) To achieve the general facility systems objective, it shall be the policy of this State to :			
(1) Accommodate the needs of Hawaiʻi'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		

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(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
Discussion: The proposed project would support the objectives and policies for facility systems in general. The proposed project would provide repairs and enhancements to an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities, ensure safety and regulatory compliance, and to reduce overall long-term maintenance and repair costs associated with operation of the transfer station. Specifically, the improvements would provide enhancements for various collection areas including a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; a future green waste area; a nets to energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste. Solid waste transfer stations play an important role in a community's overall waste management system. The proposed project would reduce the amount of trips the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing their well-being and quality of life. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs.			
§226-15 Objectives and policies for facility systems--solid and liquid wastes. (b) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives: (1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes. (2) Provision of adequate sewerage facilities of physical and economic activities that alleviate problems in housing, employment, mobility, and other areas. (c) 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 re-use 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 disposals of solid and liquid wastes.			X
Discussion: The proposed project is consistent with the objectives and policies for facility systems related to solid and liquid wastes. The project involves repairs and enhancements to an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities to ensure safety and regulatory compliance, and to reduce overall long-term maintenance and repair costs associated with waste transfer stations. Specifically, the improvements would provide enhancements for various collection areas including a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; a future green waste area; a nets to energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste. Solid waste transfer stations play an important role in a community's overall waste management system. The proposed project would reduce the amount of trips the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing their well-being and quality of life. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs.			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
§226-16 Objective and policies for facility systems--water.			
(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.			
(b) To achieve the facility systems water objective, it shall be the policy of the 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 waste water 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 project is consistent with the objectives and policies for facility systems related to water. Water demand calculations for the project will be provided to DWS for review and approval.			
§226-17 Objectives and policies for facility systems--transportation.			
(a) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			
(2) A statewide transportation system consistent with planned growth objectives throughout the State			
(b) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.			**X**
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives.			**X**
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties.			**X**
(4) Provide for improved accessibility to shipping, docking, and storage facilities.			**X**
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs.			**X**
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities.			**X**
(7) Encourage a variety of carriers to offer increased opportunities and advantages to inter-island movement of people and goods.			**X**

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs.			X
(9) Encourage the development of transportation, systems and programs which would assist statewide economic growth and diversification.			X
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaiʻi's natural environment.			X
(11) Encourage safe and convenient uses of low-cost, energy-efficient, non-polluting means of transportation.			X
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives.			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
Discussion: The proposed project would not involve facility systems related to transportation.			
§226-18 Objectives and policies for facility systems—energy. (a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all: (1) Dependable, efficient, and economical statewide energy and telecommunication systems capable of supporting the needs of the people. (2) Increased energy self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation; (3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems; (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and (5) Utility models that make the social and financial interests of Hawaii's utility customers a priority. (b) To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand (c) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources.			X
(2) Ensure a sufficient supply of energy to enable power systems to support the demands of growth.			X
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits.			X
(4) Promote all cost-effective conservation of power and fuel supplies through measures, including: (A) Development of cost-effective demand-side management programs; (B) Education;			X

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(C) Adoption of energy-efficient practices and technologies; and (D) Increasing energy efficiency and decreasing energy use in public infrastructure.			
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies.			X
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies.			X
(7) Promote alternate fuels and transportation energy efficiency.			X
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications.			X
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.			X
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects.			X
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources.			X
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			X
Discussion: The objectives and policies for facility systems related to energy are not applicable to the proposed project. Alternative energy sources, such as photo-voltaic powered systems, would be considered were deemed feasible. DEM would continue to coordinate directly with utility providers to determine system capacity and request utility service. As part of the proposed project, a portion of the site would be reserved for the Nets to Energy program which collects marine debris that would be used later to provide energy though an off-site combustion process.			
§226-18.5 Objectives and policies for facility systems--telecommunications. (a) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. (b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand. (c) To further achieve the telecommunications objective, it shall be the policy of this State to:			
(1) Facilitate research and development of telecommunication systems and resources.			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunication planning.			X
(3) Promote efficient management and use of existing telecommunication systems and services.			X
(4) Facilitate the development of education and training of telecommunication personnel.			X
Discussion: The objectives and policies for facility systems related to telecommunications are not applicable to the proposed project.			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
§226-19 Objectives and policies for socio-cultural advancement--housing. (a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives: (1) Greater opportunities for Hawaii'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 Hawaii's population. (2) The orderly development of residential areas sensitive to community needs and other land uses. (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people. (b) To achieve the housing objectives, it shall be the policy of this State to:			
(1) Effectively accommodate the housing needs of Hawaiʻi'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 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 Hawaiʻi through the design and maintenance of neighborhoods that reflect the cultures and values of the community.			**X**
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaiʻi.			**X**
Discussion: The objectives and policies for socio-cultural advancement related to housing are not applicable to the proposed project.			
§226-20 Objectives and policies for socio-cultural advancement--health. (a) Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives: (1) Fulfillment of basic individual health needs of the general public. (2) Maintenance of sanitary and environmentally healthful conditions in Hawaiʻi's communities. (3) Elimination of health disparities by identifying and addressing social determinants of health. (b) 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**

Table 4-1: The Hawai'i State Plan Part I	S	NS	N/A
(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 section 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 project involves repairs and enhancements to an existing solid waste transfer station providing facilities and services necessary to maintain environmentally healthful and sanitary conditions in the region.			
§226-21 Objective and policies for socio-cultural advancement--education. (a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations. (b) To achieve the education objective, it shall be the policy of this State to:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.			X
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			X
(3) Provide appropriate educational opportunities for groups with special needs.			X
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.			X
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			X
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			X
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			X
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			X

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(9) Support research programs and activities that enhance the education programs of the State.			**X**
Discussion: The objective of and policies for socio-cultural advancement related to education are not applicable to the proposed project.			
§226-22 Objective and policies for socio-cultural advancement--social services. (a) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being. (b) To achieve the social services objective, it shall be the policy of this State to:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			**X**
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			**X**
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities			**X**
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			**X**
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			**X**
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			**X**
Discussion: The objectives and policies for socio-cultural advancement related to social services are not applicable to the proposed project. However, the project would indirectly benefit minority populations by providing facilities and services necessary to maintain environmentally healthful and sanitary conditions in the region.			
§226-23 Objective and policies for socio-cultural advancement--leisure. (a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. (b) To achieve the leisure objective, it shall be the policy of this State to:			
(1) Foster and preserve Hawaiʻi's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			**X**
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			**X**
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			**X**
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved			**X**

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(5) Ensure opportunities for everyone to use and enjoy Hawaiʻi's recreational resources.			X
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs			X
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaiʻi's people.			X
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			X
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaiʻi's population to participate in the creative arts.			X
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X
Discussion: The objectives and policies for socio-cultural advancement related to leisure are not applicable to the proposed project.			
§**226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being.** (a) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. (b) To achieve the individual rights and personal wellbeing objective, it shall be the policy of this State to:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			X
(2) Uphold and protect the national and state constitutional rights of every individual.			X
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
(4) Ensure equal opportunities for individual participation in society.			X
Discussion: The objectives and policies for socio-cultural advancement related to individual rights and personal well-being are not applicable to the proposed project.			
§226-25 Objective and policies for socio-cultural advancement--culture. (a) Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaiʻi's people. (b) To achieve the culture objective, it shall be the policy of this State to:			
(1) Foster increased knowledge and understanding of Hawaiʻi's ethnic and cultural heritages and the history of Hawaiʻi.			X
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the life styles of Hawaiʻi's people and which are sensitive and responsive to family and community needs.			X
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community life styles in Hawaiʻi.			X

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(4) Encourage the essence of the aloha spirit in people's daily-activities to promote harmonious relationships among Hawaiʻi's people and visitors.			**X**
Discussion: The objectives and policies for socio-cultural advancement related to culture are not applicable to the proposed project.			
§226-26 Objectives and policies for socio-cultural advancement--public safety.			
(a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.			
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaiʻi's			
(b) To achieve the public safety programs objectives, it shall be the policy of this State to:			
(1) Ensure that public safety programs are effective and responsive to community needs.			**X**
(2) Encourage increased community awareness and participation in public safety programs.			**X**
(c) To achieve the public safety programs objectives, it shall be the policy of this State to:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			**X**
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			**X**
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			**X**
(d) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war related, natural, or technological disasters and civil disturbances at all times.			**X**
(2) Enhance the coordination between emergency management programs throughout the State.			**X**
Discussion: The objectives and policies for socio-cultural advancement related to public safety are not applicable to the proposed project.			
§226-27 Objectives and policies for socio-cultural advancement--government.			
(a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			
(2) Fiscal integrity, responsibility and efficiency in the state government and county governments.			
(b) To achieve the government objectives, it shall be the policy of this State to:			

Table 4-1: The Hawaiʻi State Plan Part I	S	NS	N/A
(1) Provide for necessary public goods and services not assumed by the private sector.	X		
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			X
(3) Minimize the size of government to that necessary to be effective.			X
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaiʻi.			X
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.	X		
(6) Provide for a balanced fiscal budget.			X
(7) Improve the fiscal budgeting and management system of the State.			X
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			X
Discussion: The proposed project is consistent with the objectives and policies for socio-cultural advancement related to government by repairing and enhancing an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities. The project would ensure necessary public services continue to be provided and would ensure safety and regulatory compliance, and reduce overall long-term maintenance and repair costs associated with continued operation of the transfer station. Chapter 343 is being undertaken to assure government actions are sensitive to community needs and concerns.			

PART III. PRIORITY GUIDELINES

Part III of the Hawaiʻi State Plan establishes the overall priority guidelines to address areas of statewide concern. Under HRS § 226-102, "The State shall strive to improve the quality of life for Hawaiʻi's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation."

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
§226-103 Economic priority guidelines. (a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaiʻi's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			X

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			**X**
(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety, and welfare would not be adversely affected.			**X**
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaiʻi's small-scale producers, manufacturers, and distributors.			**X**
(7) Continue to seek legislation to protect Hawaiʻi from transportation interruptions between Hawaiʻi and the continental United States.			**X**
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics: (a) An industry that can take advantage of Hawaiʻi's unique location and available physical and human resources. (b) A clean industry that would have minimal adverse effects on Hawaiʻi's environment. (c) An industry that is willing to hire and train Hawaiʻi's people to meet the industry's labor needs. (d) An industry that would provide reasonable income and steady employment.			**X**
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaiʻi business.			**X**
(10) Enhance the quality of Hawaiʻi's labor force and develop and maintain career opportunities for Hawaiʻi's people through the following actions: (a) Expand vocational training in diversified agriculture, aquaculture, and other areas where growth is desired and feasible. (b) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities. (c) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired. (d) Promote career opportunities in all industries for Hawaiʻi's people by encouraging firms doing business in the State to hire residents. (e) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities. (f) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			**X**
(b) Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaiʻi's residents and visitors.			**X**

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provides for adequate shoreline setbacks and beach access.			X
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			X
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaiʻi's significant natural, scenic, historic, and cultural resources.			X
(5) Develop and maintain career opportunities in the visitor industry for Hawaiʻi's people, with emphasis on managerial positions.			X
(6) Support and coordinate tourism promotion abroad to enhance Hawaiʻi's share of existing and potential visitor markets.			X
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			X
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			X
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaiʻi.			X
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			X
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaiʻi's agricultural community			X
(6) Seek favorable freight rates for Hawaiʻi's agricultural products from interisland and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(e) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			X
(2) Encourage the improvement of irrigation technology and promote the use of non-potable water for agricultural and landscaping purposes.			X
(3) Increase the support for research and development of economically feasible alternative water sources.			X
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
(f) Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			X
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.	X		
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
(g) Priority guidelines to promote the development of the information industry:			
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			X
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			X
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawaii's information industry services.			X
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			X
Discussion: The proposed project supports the Economic Priority Guidelines related to energy use. As part of the proposed project, a portion of the site would be reserved for the Nets to Energy program which collects marine debris that would be used later to provide energy though an off-site combustion process.			

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
§226-104 Population growth and land resources priority guidelines.			
(a) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaiʻi's people.			**X**
(2) Manage a growth rate for Hawaiʻi's economy that will parallel future employment needs for Hawaiʻi's people.			**X**
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.	**X**		
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			**X**
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			**X**
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			**X**
(7) Support the development of high technology parks on the neighbor islands.			**X**
(b) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.			**X**
(2) Make available marginal or non-essential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			**X**
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			**X**
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			**X**
(5) In order to preserve green belts, give priority to state capital improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a non-contiguous new urban core.			**X**
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			**X**
(7) Pursue rehabilitation of appropriate urban areas.			**X**
(8) Support the redevelopment of Kakaʻako into a viable residential, industrial, and commercial community.			**X**
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			**X**

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(10) Identify critical environmental areas in Hawaiʻi to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			X
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawaiʻi's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.			X
(13) Protect and enhance Hawaiʻi's shoreline, open spaces, and scenic resources.			X
Discussion: The proposed project supports the Population Growth and Land Resources Priority Guidelines by repairing and enhancing an existing solid waste transfer station to meet the current and future needs of the surrounding communities. The project would ensure necessary public services continue to be provided and would ensure safety and regulatory compliance, and reduce overall long-term maintenance and repair costs associated with continued operation of the transfer station.			
§226-105 Crime and criminal justice Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			X
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			X
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			X
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			X
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			X
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			X
Discussion: The priority guidelines related to crime and criminal justice are not applicable to the proposed project.			
§226-106 Affordable housing Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or non-essential agricultural land and public land to meet housing needs of low and moderate-income and gap-group households.			X
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			X

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(3) Improve information and analysis relative to land availability and suitability for housing.			**X**
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaiʻi's low and moderate-income households, gap-group households, and residents with special needs.			**X**
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaiʻi's people for the purchase of initial owner-occupied housing.			**X**
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			**X**
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			**X**
(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.			**X**
Discussion: The priority guidelines related to the provision of affordable housing are not applicable to the proposed project.			
§226-107 Quality education. Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			**X**
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs.			**X**
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force.			**X**
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			**X**
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for: (A) The electronic exchange of information; (B) Statewide electronic mail; and (C) Access to the Internet. Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives.			**X**
(6) Pursue the establishment of Hawaiʻi's public and private universities and colleges as research and training centers of the Pacific.			**X**
(7) Develop resources and programs for early childhood education.			**X**
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			**X**
(9) Strengthen and expand educational programs and services for students with special needs.			**X**

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
Discussion: The priority guidelines related to promoting quality education are generally not applicable to the proposed project.			
§226-108 Sustainability. Priority guidelines and principals to promote sustainability:			
(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.			X
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaiʻi.	X		
Discussion: The proposed project supports the Priority Guidelines and principles supporting sustainability by repairing and enhancing an existing solid waste transfer station to meet the current and future needs of the surrounding communities. The project would ensure necessary public services continue to be provided and would ensure safety and regulatory compliance, and reduce overall long-term maintenance and repair costs associated with continued operation of the transfer station. Specifically, the improvements would provide enhancements for various collection areas including a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; a future green waste area; a nets to energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste. Solid waste transfer stations play an important role in a community's overall waste management system. The proposed project would reduce the amount of trips the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing their well-being and quality of life. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs.			
§226-109 Climate change adaption. Priority guidelines for climate change adaption:			
(1) Ensure that Hawaii'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 Hawaii'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

Table 4-2: The Hawaiʻi State Plan Part III	S	NS	N/A
(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.			**X**
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			**X**
Discussion: The Priority Guidelines related to climate change adaptation are not applicable to the proposed project. In general, the proposed project would maintain existing conditions. No significant impacts on climate in the region are anticipated. Moreover, the exact nature of how the climate would change and impacts from any changes is unknown. New information would continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaption strategies to climatic changes.			

4.1.2 State Functional Plans

The Hawaiʻi State Plan directs appropriate State agencies to prepare Functional Plans which address statewide needs, problems, and issues, and recommend policies and actions to mitigate those problems. The Functional Plans are prepared to further define and implement statewide goals, objectives, policies, and priority guidelines contained in the Hawaiʻi State Plan. Thirteen Functional Plans were prepared to implement the State Plan provisions in the areas of agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation.

Table 4-3: Hawaiʻi State Functional Plans		S	NS	N/A
1	**Agricultural State Functional Plan (1991)**			
Purpose: Continued viability of agriculture throughout the State				**X**
Discussion: The Agriculture State Functional Plan is not applicable to the proposed project.				
2	**Conservation Lands State Functional Plan (1991)**			
Purpose: Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry				**X**
Discussion: The Conservation Lands State Functional Plan is not applicable to the proposed project.				

Table 4-3: Hawaiʻi State Functional Plans		S	NS	N/A
3	**Education State Functional Plan (1989)**			
Purpose: Improvements to Hawaiʻi's educational curriculum, quality of educational staff, and access to adequate facilities				**X**
Discussion: The Education State Functional Plan is not applicable to the proposed project.				
4	**Employment State Functional Plan (1990)**			
Purpose: Improve the qualifications, productivity, and effectiveness of the State's workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities				**X**
Discussion: The Employment State Functional Plan is not applicable to the proposed project.				
5	**Energy State Functional Plan (1991)**			
Purpose: Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems		**X**		
Discussion: The proposed project would support the Energy State Functional Plan. The proposed project would include a portion of the site reserved for the Nets to Energy program which would collect marine debris that would be used later to provide energy though an off-site combustion process.				
6	**Health State Functional Plan**			
Purpose: Improve the health care system by providing for those who do not have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs				**X**
Discussion: The Health State Functional Plan is not applicable to the proposed project.				
7	**Higher Education Functional Plan (1984)**			
Purpose: Prepare Hawaiʻi's citizens for the demands of an increasingly complex world through providing technical and intellectual tools				**X**
Discussion: The Higher Education Functional Plan is not applicable to the proposed project.				
8	**Historic Preservation State Functional Plan (1991)**			
Purpose: Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawaiʻi				**X**
Discussion: The Historic Preservation State Functional Plan is not applicable to the proposed project.				
9	**Housing State Functional Plan (1989)**			
Purpose: Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system				**X**
Discussion: The Housing State Functional Plan is not applicable to the proposed project.				

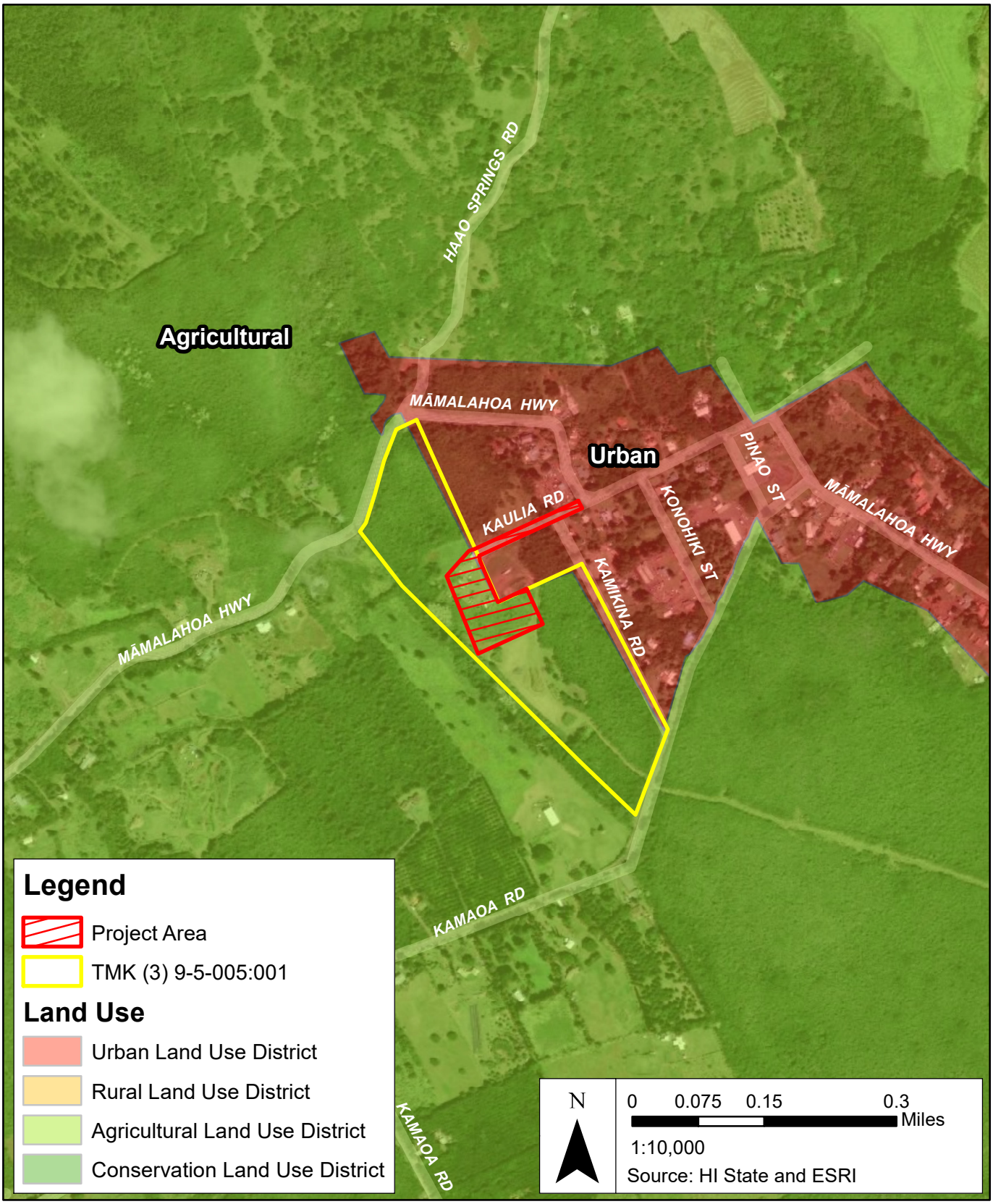
Table 4-3: Hawaiʻi State Functional Plans		S	NS	N/A
10	**Human Services State Functional Plan (1991)**			
Purpose: Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency'				**X**
Discussion: The Human Services State Functional Plan is not applicable to the proposed project.				
11	**Recreation State Functional Plan (1991)**			
Purpose: Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management				**X**
Discussion: The Recreation State Functional Plan is not applicable to the proposed project.				
12	**Tourism State Functional Plan (1991)**			
Purpose: Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry				**X**
Discussion: The Tourism State Functional Plan is not applicable to the proposed project.				
13	**Transportation State Functional Plan (1991)**			
Purpose: Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand				**X**
Discussion: The Transportation State Functional Plan is not applicable to the proposed project.				

4.1.3 State Land Use Law, Chapter 205, Hawaiʻi Revised Statutes

The State Land Use Law, Chapter 205, HRS, establishes an overall framework of land use management whereby all lands in the State of Hawaiʻi are classified into one of four land use districts: Urban District, Agricultural District, Conservation District, and Rural District. The State Land Use Commission (LUC) is responsible for preserving and protecting Hawaii's lands and encouraging those uses to which lands are best suited.

Discussion

The majority of the proposed project area is situated within the Agricultural State Land Use District (See Figure 4-1). The Agricultural District generally includes lands for the cultivation of crops, aquaculture, raising livestock, wind energy facilities, timber cultivation, agriculture-support activities, and land with the significant potential for agriculture uses. However, pursuant to §205-4.5(7), HRS, "solid waste transfer stations" is a permitted use within the Agricultural State Land Use District.



WILSON OKAMOTO CORPORATION

FIGURE 4-1

STATE LAND USE DISTRICTS

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

A small portion of the project area is located within the Urban State Land Use District. The portion of the project that is in the Urban State Land Use District, is the access road to the Waiʻōhinu Transfer Station. Urban District lands generally include lands characterized by "city-like" concentrations of people, structures, and services. In general, lot sizes and uses permitted in the district area are established by the county through ordinances or rules.

In general, the purpose and intent of the proposed project is consistent with the Urban and agriculture State Land Use District.

4.1.4 Hawaiʻi Coastal Zone Management Program, Chapter 205A, Hawaiʻi Revised Statutes

The National Coastal Zone Management (CZM) Program was created through passage of the Coastal Zone Management Act of 1972. The U.S. Congress enacted the CZM Act to assist states in better managing coastal and estuarine environments. The Act provides grants to states that develop and implement federally-approved CZM plans. The goal of the CZM Act is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Hawaiʻi's CZM Act, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring and responsibly developing coastal communities and resources. In Hawaiʻi, the "coastal zone management area" means all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the territorial sea. The proposed project's conformance with the ten objectives and numerous policies of the State of Hawaiʻi CZMP is set forth in Table 4-4 below:

Table 4-4: Hawaiʻi Coastal Zone Management Act	S	NS	N/A
Recreational Resources			
Objective: Provide coastal recreational opportunities accessible to the public.			
Policies			
(A) Improve coordination and funding of coastal recreational planning and management; and			**X**
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			**X**
i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			**X**
ii. Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement 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 public recreation;			**X**

Table 4-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
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 such dedication against the requirements of section 46-6.			X
Discussion: The proposed project is not located in close proximity to the shoreline or any water body such as a stream, river, pond, lake, or ocean, and as such would not affect coastal recreational opportunities accessible to the public.			
Historic Resources			
Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.			
Policies:			
(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: The proposed project would have no significant impact on historic and cultural resources. For the subject EA, Honua Consulting prepared an Archaeological LRFI report for the proposed project to identify and analyze resources. No potential archaeological sites were observed during field inspections. However, no sub-surface archaeological investigations have been conducted at the project site to assess the potential for cultural deposits to exist. Therefore, it was recommended that an archeological monitoring program is conducted in accordance with HAR 13-279 to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the proposed project. DEM will also consult with SHPD through the grading permit process in compliance with State historic preservation review requirements to determine appropriate mitigation measures for the project.			
Scenic and Open Space Resources			
Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
Policies			
(A) Identify valued scenic resources in the coastal zone management area;			X

Table 4-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms 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 proposed project would not affect the quality of coastal scenic and open space resources. The proposed project involves repairs and enhancements to an existing transfer station, which is screened from the existing highway by vegetation. Waiʻōhinu Transfer Station is located inland and away from the coast. As such, the project would not adversely affect existing public views to and along the shoreline. Waiʻōhinu Transfer Station is presently visible only from areas that are a significant distance away on the upper slopes mauka of the transfer station.			
Coastal Ecosystems			
Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies			
(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, including reefs, of significant biological or economic importance;			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 project is not expected to have any adverse effects on coastal ecosystems. Waiʻōhinu Transfer Station is not located in close proximity to the shoreline or any water body such as a stream, river, pond, lake, or ocean. All development related runoff would be retained on site and directed towards shallow drywells as required.			
Economic Uses			
Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies			
(A) Concentrate coastal dependent development in appropriate areas;			X
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and			X

Table 4-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when: i. Use of presently designated locations is not feasible; ii. Adverse environmental effects are minimized; and iii. The development is important to the State's economy;			**X**
Discussion: The proposed project does not involve a development of, and is not expected to have any adverse effects on, any public or private facilities in coastal areas that are important to the State's economy.			
Coastal Hazards			
Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.			
Policies			
(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;			**X**
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;			**X**
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and			**X**
(D) Prevent coastal flooding from inland projects.			**X**
Discussion: Waiʻōhinu Transfer Station along with much of the surrounding area is designated as Zone X—an area determined to be outside of the 500-year flood plain. All development related runoff would be retained on site and directed towards shallow drywells as required. The proposed project is not expected to exacerbate natural levels of flooding or affect flood zone areas.			
Managing Development			
Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies			
(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: This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the proposed project, complies with the policy on managing development. The Draft EA informed interested parties of the proposed project and sought relevant public comment on subjects of concern for EA documentation. The filing and publication of the Draft EA with the OEQC was followed by a 30-day public comment period. All relevant public comments received during the 30-day public comment period received a written response and are included in this Final EA as Appendix B.			

Table 4-4: Hawaiʻi Coastal Zone Management Act	S	NS	N/A
Public Participation			
Objective: Stimulate public awareness, education, and participation in coastal management.			
Policies:			
(A) Promote public involvement in coastal zone management processes;	**X**		
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and	**X**		
(C) Organize workshops, policy dialogues, and site-specific mitigation to respond to coastal issues and conflicts.			**X**
Discussion: Public involvement would consist of public notice of the proposed project during the State environmental review process through publication in the State OEQC Bulletin, and through direct coordination with agencies, organizations, and individuals. See Section 8.1 for a list of the agencies, organizations and individuals that have been consulted for the proposed project. The publication of the Draft EA was followed by a 30-day public comment period and those comments and responses have been included in this Final EA as Appendix B. If deemed necessary by DEM, a public informational meeting was to be held during the 30-day public comment period to address community concerns and provide more information about the project. A meeting was not held as it was not deemed necessary.			
Beach Protection			
Objective: Protect beaches for public use and recreation.			
Policies:			
(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 erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and			**X**
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.			**X**
(D) 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**
(E) 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 proposed project is not anticipated to have a significant impact on beach and shoreline processes. Waiʻōhinu Transfer Station is not located in close proximity to the shoreline or any water body such as a stream, river, pond, lake, or ocean. All development related runoff would be retained on site and directed towards shallow drywells as required.			

Table 4-4: Hawaiʻi Coastal Zone Management Act	S	NS	N/A
Marine Resources			
Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
Policies			
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			**X**
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			**X**
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;			**X**
(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and			**X**
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			**X**
Discussion: The proposed project is not anticipated to adversely affect marine or aquatic resources. Waiʻōhinu Transfer Station is not located in close proximity to the shoreline or any water body such as a stream, river, pond, lake, or ocean. All development related runoff would be retained on site and directed towards shallow drywells as required.			

4.2 County of Hawaiʻi Land Use Plans and Policies

4.2.1 County of Hawaiʻi Draft General Plan 2040

The County of Hawaiʻi's General Plan (2005) is a policy document guiding the long-range comprehensive development of the island of Hawaiʻi. The General Plan has a 20 to 30-year planning horizon. The General Plan represents the first level and encompass long-range goals, policies, standards, and courses of action for the entire County. The General Plan provides the legal basis for all the other elements of the County's planning structure. It establishes the boundaries within which the County must operate. Moreover, it brings into focus the relationship between residents and their pursuits and institutions, offering policy statements that embody the expressed goals for present and future generations.

The Plan contains goals, policies and standards to guide the development of the County in 6 areas: natural resource planning, infrastructure planning, economic and opportunity planning, community placemaking, land use planning, and implementation priorities and actions. The project is consistent with Policy 10.5.2 (c) which states that "Appropriately designed and cost-effective solid waste transfer station sites shall be located in areas of convenience and easy access to the public." With the Waiʻōhinu Transfer Station already in place and in use in a convenient location it is appropriate to allow enhancement of trash collection services at the Waiʻōhinu Transfer Station to allow ease of access and use to residents in the surrounding region.

Currently, the County of Hawaiʻi is updating its General Plan, which is under review by the public, various agencies, and organizations. Since the General Plan is currently a draft document, it is anticipated that further edits and revisions will be made before submission to the Planning Commission and the County Council. The goals, policies, and standards of the Draft General Plan related to the proposed project are discussed below in Table 4-5.

Table 4-5: County of Hawaiʻi Draft General Plan 2040	**S**	**NS**	**N/A**
Section 1: Natural Resources Planning			
Sustainability Objective: Increase native habitat restoration on County owned or managed land			
Policies			
1. Priority habitat restoration sites shall be identified as those disturbed areas whose restoration will result in the greatest habitat benefit.			**X**
2. Maintain a program for acquiring and maintaining native habitat to implement the recommendations in the Hawaiʻi State Wildlife Action Plan (SWAP).			**X**
3. As part of any permit application to the County Planning Department, the following natural and cultural resources shall be considered sensitive and therefore shall be inventoried with identified mitigation measures: a. Critical habitat areas as identified by the U.S. Fish & Wildlife or County General Plan; b. Predominantly native ecosystems, which may not be considered endangered but are valued because of their nearly pristine condition; c. Anchialine ponds; d. High-level groundwater recharge areas; e. Historic trails; and f. Archaeological and historic sites subject to protection under HRS Chapter 6E			**X**
4. Development shall not disturb the following: a. Anchialine pools; b. Freshwater wetlands; c. Shoreline setback area; d. Plant species listed by the US Fish and Wildlife Service as threatened and endangered; e. Exceptional trees;	**X**		
5. Hawaiʻi County shall discourage developments and limit clearing of vegetation within Habitat Overlays.			**X**
6. Establish Habitat Overlay Districts for: a. Natural areas including old and new growth upland native vegetated areas with minimal existing development and/or infrastructure. b. Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat.			**X**

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
c. Lands required to provide an undeveloped buffer between natural areas and development to reduce secondary impacts; roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth. d. Lands designated for acquisition by public agencies for conservation and natural resource protection. e. Known or potential locations of threatened and endangered species and species of greatest conservation need. f. Lands designated as conservation on the SLU, Future Land Use maps or Zoning maps or within a buffer/restoration area as appropriate. g. Identified wetlands			
7. Hawai‘i County shall require clustering of any developments within Habitat Overlay Districts to avoid sensitive areas.			**X**
8. Maintain and restore native habitat including marine, wetland, shoreline, and native upland systems on County owned or managed lands.			**X**
9. Manage land uses to protect nesting areas and any bird species federally or state listed as endangered, threatened, or a species of special concern.			**X**
10. Assess and prioritize County-owned areas for restoration in consultation with State, Federal, and private entities.			**X**
11. Protect and provide for restoration of significant natural and cultural features and ecologically sensitive lands, including but not limited to mountain areas, shoreline and coastal communities/areas, wetlands, fishponds, forests, natural gulches, riparian areas, streams and drainage ways.			**X**
12. Partner with the Big Island Invasive Species Committee (BIISC) and the University Hawai‘i to develop a program for identification and protection of plant species of special status. Include plants designated as threatened and endangered by the US Fish and Wildlife Service and plants significant for cultural practitioners.			**X**
13. Partner with State and Federal agencies to support seedbanks of native and endemic plant species, especially species that are threatened or endangered.			**X**
14. Partner with the State Land Use Commission to establish a conservation buffer to accommodate shifting native habitats impacted by climate change, particularly wetlands and high-elevation forests.			**X**
15. Incentivize the planting of threatened and endangered endemic plants species within their native ranges and during development activities.			**X**
16. Incentivize the removal of invasive species during development activities			**X**
17. Partner with State, Federal, and private entities to support programs designed to avoid the introduction and establishment of invasive species and the control and eradication of invasive species; particularly that serve as disease vectors.			**X**
18. Partner with State, Federal, and private entities to support protection of native wildlife and habitat.			**X**
19. Support the implementation of a Habitat Conservation Plan (HCP) for Protected Species on Hawai‘i Island.			**X**
Discussion: The proposed project would not adversely impact endangered species, native species, or critical habitats.			

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Increase percentage of forest and woodland cover			
Policies:			
20. Prioritize urban tree inventories for primary urban areas such as Downtown Hilo, Waimea, and Kailua-Kona			**X**
21. Include reforestation elements in Community Development Plans, Special Area Plans, and community conservation projects.			**X**
22. Explore the feasibility of adopting a No Net Loss of Forest policy.			**X**
23. Encourage the planting of native trees, shrubs, and grasses in appropriate areas to increase forest buffer functions, forest diversity, and to reduce storm water runoff.			**X**
24. Continue to promote and support programs for community reforestation.			**X**
Discussion: The proposed project is not applicable to the objective related to forest and woodland cover.			
Sustainability Objective: Measure coastal habitat to track potential habitat gains/losses and study the effectiveness of mitigation measures.			
Policies			
25. Implement education programs and actions to prohibit the destruction of, and work toward the recovery of, monk seals, whales, and marine turtles, as well as their natural habitats.			**X**
26. Priority shoreline acquisition shall include sites with: a. Documented nesting sites for designated endangered or threatened species; b. Public recreation uses without adverse impacts on sensitive natural resources.			**X**
27. Maintain shoreline setback policies pertaining to permitted uses, siting of structures, disturbances, removal of invasive vegetation, and restoration of native vegetation in shoreline areas.			**X**
28. Evaluate the minimum shoreline setbacks currently in use in Hawai'i County in coordination with CDP recommendations. Setbacks shall be developed to accomplish the following: a. Protect natural shoreline vegetation; b. Protect marine turtle nesting beaches/areas; c. Protect water quality; d. Protect structures from the effects of long-term sea level rise; e. Protect beaches and shorelines from erosion; and f. Allow redevelopment of existing waterfront commercial structures consistent with the existing community character and preserve overwater views.			**X**
29. No new bulkheads, seawalls or other hardened vertical shoreline structures shall be permitted on unaltered shorelines			**X**
30. Maintain a program for acquiring undisturbed shoreline resource areas.			**X**

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
31. Regularly coordinate with Federal, State, regional and research agencies and organizations responsible for monitoring impacts to coral reefs.			X
32. In coordination with relevant agencies, the County will contribute to and participate in the development and implementation of marine zoning plan(s), Marine Managed Areas (MMA's) or other appropriate tool(s) which incorporate resilience-based concepts to provide maximum protection for all reef types and associated habitats.			X
33. Support the acquisition of undisturbed shoreline resource areas for conservation.			X
34. Support actions consistent with the State of Hawai'i Ocean Resources Management Plan.			X
Discussion: The proposed project would not affect the shoreline or coastal resources as the project site is located approximately four miles from the nearest shoreline.			
Sustainability Objective: Increase protections and restoration of wetland habitats.			
Policies			
35. Priority wetland restoration sites shall be those disturbed wetlands having the greatest functional value as determined through quantitative wetland assessment.			X
36. No fill or structures shall be permitted in wetlands.			X
37. Require minimum wetland setbacks of 50 feet to be maintained as an open space buffer for development occurring adjacent to all types of wetlands			X
38. Maintain a program for acquiring and/or restoring high quality wetlands and anchialine pools.			X
39. Develop and implement regulations to reduce disturbances to wetlands and mitigate impacts of development to wetlands.			X
Discussion: The objective related to wetland habitats are not applicable to the proposed project.			
Sustainability Objective: Reduce impaired inland and marine waters			
Policies			
40. The environmental quality of the island's surface waters, riparian areas, streams, and associated resources shall be maintained and, wherever possible, improved or restored.			X
41. Lands necessary for the protection of watersheds, water sources and water supplies shall be protected and conserved.			X
42. Hawai'i County shall require that, to the greatest extent practicable, development activity, such as land clearing, grading and filling will not disturb natural drainage patterns.	X		
43. Limit clearing and impervious surfaces for developments located in identified priority watershed areas.			X
44. Continue to coordinate with State, Federal, and private entities to document pollutant loads for Hawai'i Island streams and coastal waters.			X
45. Practice watershed protection in furtherance of ahupua'a principles.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
46. Participate in watershed partnerships to identify priority watershed areas and develop watershed management plans and projects.			X
47. Partner with State, Federal and with other Counties to address water management practices and engage in comprehensive watershed planning, including identifying priority watershed areas.			X
48. Explore the feasibility of incentive methods such as property tax dedications, conservation easements, or transfer of development rights to protect the defined zone of influence of existing or proposed public and private wells.			X
49. Collaborate with the Department of Health, the USDA Natural Resource Conservation Service, and the Soil and Water Conservation District to reduce runoff, maximize soil and water conservation, and protect and effectively manage watersheds and natural areas.			X
50. Encourage the County and the State to investigate and implement alternatives to the use of herbicides for weed control on public properties.			X
51. Work to identify areas where nutrient pollution is having the greatest impact on overall water quality.			X
52. Support the DOH and DLNR in its effort to have an implemented conservation plan for all agricultural operations and a nutrient management plan for application of all animal and chemical nutrients.			X
53. Establish riparian protection areas around streams, ponds, perennial flowing natural springs, and all springs and reservoirs serving as water supplies.			X
Discussion: The proposed project would not involve any work near inland or marine waters. Ground disturbance related to the proposed project would be limited to that necessary for the proposed improvements and will follow all applicable County, State, and federal rules and regulations.			
Sustainability Objective: Initiate an inventory of soil, mineral and unique geologic resources.			
Policies			
54. All (geologic and mineral) resource extraction shall follow State and Federal safety and health regulations.			X
55. Protect caves, including lava tubes, and the unique cultural and natural resources inside them.			X
Discussion: The proposed project is not expected to affect soil, minerals, and unique geologic resources.			
Sustainability Objective: Maintain air quality to adhere to standards set by the State and Federal Agencies.			
Policies			
56. Continue to meet all air quality standards set by the State of Hawai'i and the U.S. Environmental Protection Agency (EPA), including noxious odors and industrial emissions	X		
57. Continue to enforce; maintain and expand as needed a "Dark Sky" Ordinance(s).			X
58. Partner with State and Federal agencies in air quality hazard events (e.g. eruption events) to increase monitoring, public reporting, and mitigation recommendations.			X
Discussion: The proposed project is not anticipated to have any significant impacts on air quality. A dust management control plan will be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. Measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction will be incorporated into the project plans and specifications. Construction activities must			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
comply with the provisions of Hawai'i Administrative Rules, §11-60.1-33 on Fugitive Dust. Respective contractors would be responsible for adhering to air quality standards and minimizing air quality impacts during the various phases of construction. An air pollution control permit may be required to operate certain construction equipment, such as crushers or generator sets, which may be used during construction. If required, the contractor will be responsible for obtaining an air pollution control permit from the Clean Air Branch and complying with all applicable conditions and requirements. Exhaust emissions from construction vehicles are anticipated to have negligible impacts on air quality in the project vicinity as the emissions would be temporary in nature, relatively small, and readily dissipated. Any long-term potential impacts would be mitigated by complying with the State DOH Administrative Rules, Title 11, Chapter 60 "Air Pollution Control". Nuisance odors would be mitigated through implementation of best management practices.			
Sustainability Objective: Maintain noise quality to adhere to standards set by the State and Federal Agencies.			
Policies:			
59. Continue to meet all noise quality standards set by the State of Hawai'i and the U.S. Environmental Protection Agency (EPA).	**X**		
60. During site plan approval, require appropriate buffers or other noise abatement measures for land uses with potential noise impacts in the vicinity of residential or commercial areas.	**X**		
61. Partner with State and Federal agencies to continue monitoring and mitigating aircraft noise.			**X**
62. Future land uses in the vicinity of industrial areas, including airports, should have an adequate open space buffer and/or be compatible with the anticipated aircraft noise exposure levels for that vicinity.			**X**
Discussion: Construction of the proposed project may result in short-term noise impacts on the surrounding environment. Noise generated by temporary construction activities would be similar in character and intensity to the existing noise conditions and is not anticipated to have an adverse effect on overall noise levels. Any potential impacts would be mitigated by complying with the State DOH Administrative Rules, Title 11, Chapter 46 "Community Noise Control" regulations. In the long-term, proposed mulching activities would introduce a new source of noise to the project area. It is anticipated that the noise generated by mulching activities would be similar in character and intensity to existing noise generators in the project area and would be offset by a reduction in noise generated by truck traffic servicing the Waiʻōhinu Transfer Station with construction of the tipping floor within an enclosed structure. Potential impacts to sensitive receptors in the vicinity would be further mitigated by limiting hours of mulching activities to occur intermittently on weekdays within standard daytime work hours.			
Sustainability Objective: Risks are lowered using hazard mitigation strategies.			
Policies:			
63. 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**
64. Prioritize drainage and flood studies for high risk urban areas within the Urban Growth Area.			**X**
65. Drainage standards shall incorporate cumulative upslope development patterns.			**X**
66. Hawai'i County shall review and evaluate floor elevation requirements, as necessary, for all new construction in vulnerable areas			**X**

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
67. Require the consolidation of contiguous parcels that do not conform to current code (non-conforming) in high risk hazard areas.			X
68. Hawai‘i County building code shall be updated to maintain consistency with the Hawai‘i State Building Code no later than two years after adoption of the Hawai‘i State Building Codes.			X
69. Coastal High Hazard Area is the area including tsunami inundation, sea level rise and special flood hazard areas. The Coastal High Hazard Area shall be shown on the Future Land Use Map.			X
70. The “Drainage Master Plan” shall be revised and updated to include the new studies and to provide a watershed perspective in managing floods using both structural and nonstructural methods.			X
71. Discourage infrastructure investments in high risk hazard areas and incentivize infrastructure expenditures outside high risk hazard areas.	X		
72. Incorporate hazard mitigation strategies into policies and planning decisions and use the most conservative models in defining hazard areas			X
73. Partner with State, Federal, and private entities to improve urban flood prediction by developing real-time field-monitoring systems.			X
74. Evaluate ownership and/or maintenance responsibility for flood corridors that serve regional multiple benefits.			X
75. Utilize Hawai‘i Wildfire Management Organization (HWMO), Wildfire Community Hazard Assessment/ Hazard Mapping and Wildland/Urban Risk Assessment in its process of determining Fire Hazards and Risk to guide appropriate areas for development.			X
76. Implement best management practices for wildfire control and reclamation.			X
77. Natural resources that provide buffers from hazards are protected and conserved, including aquifers, watersheds, streams, coastal waters, forest and coastal ecosystems, lava tubes, and rare and endangered native species and habitats			X
Discussion: The proposed project is generally located in an area at low risk to environmental hazards, such as lava flows, flooding, tsunami, or coastal erosion.			
Sustainability Objective: Pre-disaster and post-disaster plans increase resilience.			
Policies			
78. Ensure emergency response plans are adequate for each community.			X
79. Ensure emergency evacuation routes are adequate for each community vulnerable to hazard.			X
80. Hawai‘i County shall ensure warning siren coverage is adequate for each community			X
81. Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;			X
82. Prioritize hazard mitigation projects in the Capital Improvements Program.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
83. All emergency response critical facilities and communication systems shall be designed and maintained to be resilient and remain operational during hazard events.			X
84. All emergency facilities shall be located outside the 100-year flood-prone areas			X
85. Hawai‘i County shall continue to participate in the National Flood Insurance Program (NFIP) Community Rating System (CRS) to the maximum extent possible and shall seek to improve its current CRS Class rating (to maximum extent feasible to reduce insurance costs).			X
86. Require hazard disclosures in all real estate conveyance transactions.			X
87. Guidelines for development contained in the Post-Disaster Redevelopment Plan shall be incorporated within the General Plan by plan amendment after a natural disaster.			X
88. Address and monitor known hazards along transportation routes.			X
89. Encourage the development and implementation of Community Wildfire Protection Plans and Firewise Community Certification for communities with high wildfire risk.			X
90. Increase public education related to hazard zones, including evacuation routes and procedures for visitor accommodations.			X
91. Develop the capacity for hazard preparedness of non-governmental organizations, businesses, and neighborhood groups.			X
92. Partner with the State to assess and plan for alternative routes and possible relocation of coastal roads.			X
93. County public expenditures within identified hazard areas should be limited to the restoration or enhancement of natural resources and parklands, expenditures required to serve existing development such as the maintenance or repair of existing infrastructure, and expenditures necessary for public health and safety.			X
Discussion: The proposed project is not applicable to the objective related to disaster resilience.			
Sustainability Objective: Partner with community stewardship groups, local stakeholders and intergovernmental agencies to reduce island-wide greenhouse gas emissions (GHGEs) by at least 80 percent from 2005 levels by 2050.			
94. Prioritize energy efficient designs, energy efficient systems, and waste reduction/reuse at County facilities.	X		
95. Include the useful life of the infrastructure and the cost savings related to reduced energy needs in Capital Improvement Projects.			X
96. Partner with County, State, and private entities to develop comprehensive and coordinated strategies promoting energy and water conservation to strive for climate change resilience.			X
97. Consider values of natural areas for sequestering carbon and providing climate adaptation and mitigation strategies in evaluating public investments, including acquisition, siting, and design.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
98. Evaluate the need and opportunities to reduce vehicle miles traveled (VMT), such as offering a range of transportation choices in new development or redevelopment projects; incentivizing connectivity between differing modes of transportation to increase modal split and linking residential and employment center land uses to reduce the need for single vehicle trips.			X
99. Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.			X
Discussion: The proposed project would provide repairs and enhancements to an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities. Proposed improvements are intended to ensure safety and regulatory compliance, and to reduce overall long-term maintenance and repair costs associated with waste transfer stations. Specifically, the improvements would include collection areas for new waste streams such as a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; future green waste area; nets to energy collection area; and a tipping building with dedicated tipping floor for residential and future commercial solid waste. These improvements would offer more flexibility in terms of disposal options. Waste transfer stations play an important role in a community's total waste management system. The proposed project would reduce the amount of trips for the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing the well-being for residents in the surrounding communities. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs.			
Sustainability Objective: Reduce vulnerability to sea level rise (SLR) for all vulnerable communities and infrastructure.			
100. Implement a minimum sea level rise assumption of 3.2 feet for budgetary, land use, and other decision-making processes.			X
101. Use accurate and up-to-date scientific predictions and observations related to climate change impacts to guide adaptation policy and future land use decisions.			X
102. Support local and regional climate change modeling and monitoring programs. This may include but is not be limited to the programs designed to monitor: a. Surface water quality (including temperature); b. Sea level rise; c. Hydrologic and geologic conditions; d. Groundwater quality and levels; e. Precipitation and groundwater changes			X
103. Evaluate Capital Improvement Projects for resiliency, including but not limited to, sea level rise, flood and storm surge, and assure that the project's useful life and service expectations can be met in the face of projected climate change impacts.			X
104. Coordinate with appropriate agencies to monitor impacts which may be specific to Hawai‘i County due to its unique exposure to climate change and sea level rise impacts.			X
105. Partner with communities to develop adaptation strategies (protection, accommodation, managed retreat, and preservation) for vulnerable areas including conducting vulnerability assessments and assessing land use and land availability.			X
Discussion: The objective related to sea level rise is not applicable the proposed project as the project area is located approximately four miles from the nearest shoreline.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Section 2: Infrastructure Planning			
Sustainability Objective: Reduce water use by 130 gallons per day per person.			
106. Ensure the highest quality of water is reserved for the most valuable end use.			X
107. The County shall require water conservation, recharge, and reuse measures for new large development projects in the North Kohala, South Kohala, and North Kona Districts.			X
108. The withdrawal rate from groundwater aquifers shall not exceed 80% of the sustainable yield, until regional studies determine lower sustainability thresholds.	X		
109. New large developments with private water systems shall be required to follow the domestic use guidelines including appropriate limits on average daily demand.			X
110. Require developments seeking land use entitlements with private water systems to report monthly ground water use including quantity pumped, chloride (and/or conductivity) concentrations, temperature, and (pump off) water-level data.			X
111. The County shall require verification of a long-term, reliable supply of water before applicable subdivisions are approved.			X
112. Work cooperatively with the State DLNR and communities to ensure the protection and availability of an adequate water supply in all aquifers to meet the needs of the population and anticipated growth of Hawai'i County			X
113. Evaluate and amend the fee schedule for water use to take into account high water use and aquifer recharge projections. Use the funds generated to pay for conservation measures and infrastructure.			X
114. Evaluate developing a land use overlay for water conservation areas			X
115. Support implementation of leak detection programs throughout the DWS water systems.			X
116. Improve County water conservation practices to lead by example.			X
117. Support the Commission on Water Resource Management's effort to improve monthly reporting on ground water use.			X
Discussion: Water demand calculations for the project will be provided to DWS for review and approval.			
Sustainable Objective: Achieve 100% of all public and private water systems meeting safe drinking water standards.			
118. All new water systems (public and private) shall meet the level of standards of DOH, DWS, Fire, and subdivision code.	X		
119. Improvements to County water systems to meet the standards of DOH, DWS, Fire, and subdivision code shall be prioritized to serve designated urban areas.	X		
120. Encourage all new catchment water systems to include purification systems.	X		
Discussion: Water system improvements associated with the proposed project will be designed to meet applicable County codes and requirements.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Increase public water service to all urban areas.			
121. Water system improvements, including exploratory wells, shall correlate with the County's desired land use development pattern			X
122. The County Water Board shall prioritize infill development and focus source development to serve designated Urban Growth Areas.	X		
123. Water demand projections shall include all demand, including non-potable use.	X		
124.. The Department of Water Supply and the Planning Department shall coordinate priorities prior to the adoption of any new water development or land use plans.			X
125. Prioritize replacement of surface potable water sources with groundwater potable water sources.			X
126. All County potable water systems should have back-up standby sources.			X
127. Treat all water as a public resource in community design, and integrate designs for drinking water, storm water, and recreational water needs.			X
128. Support community financing of private potable water systems for communities that rely on catchment and private wells for drinking water.			X
129. Manage water, stormwater, and wastewater as the same natural resource and related utility.			X
Discussion: The proposed project involves repairs and enhancements to an existing solid waste transfer station. Water demand calculations for the project will be provided to DWS for review and approval.			
Sustainability Objective: Increase use of Low Impact Development Practices.			
130. The County shall ensure sites are planned, designed, and developed to: a. Mitigate direct impacts of the land development process through the use of green infrastructure or low impact site planning techniques; b. Protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; c. Limit land disturbance activities such as clearing and grading, and cut and fill to reduce erosion and sediment loss; and d. Manage post-construction stormwater runoff rates, through the use of green infrastructure or low impact development stormwater management practices	X		
131. The County shall ensure that golf course developments develop and implement grading and site preparation plans to: a. Develop nutrient management guidelines appropriate to Hawai'i for qualified superintendents to implement so that nutrients are applied at rates necessary to establish and maintain vegetation without causing leaching into ground and surface waters. b. Develop and implement an integrated pest management plan. Follow EPA guidelines for the proper storage and disposal of pesticides. c. Develop and implement irrigation management practices to match the water needs of the turf.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
132. Hawai'i County shall minimize impervious areas on development sites and parking areas and promote the use of permeable surfaces and landscaped areas in project designs including: a. porous materials b. natural drainage c. filtration pits, d. Infiltration trenches, vegetated bioswales, permeable pavers	X		
133. Incorporate green infrastructure or passive alternatives that maximize land preservation over impervious or active infrastructure.	X		
Discussion: Construction of the proposed project would involve land disturbing activities, which could result in short-term soil erosion impacts. These activities would be mitigated by incorporating BMPs and erosion control measures into the project plans and specifications. Specific measures may include, but are not limited to: revegetating or stabilizing disturbed areas of soil as soon as possible after working, minimizing disturbance of soil during periods of heavy rain, applying protective covers to soil and material stockpiles, and installing appropriate erosion and sedimentation control devices during construction. In addition, the project will comply with the requirements of Hawai'i County Code, Chapter 10, related to Erosion and Sedimentation Control. Following construction, exposed soils in the project area would be paved over, stabilized, or re-vegetated to control erosion. An individual wastewater treatment system, consisting of a septic tank and soil absorption bed, would be installed for the treatment and disposal of domestic wastewater and any potential leachate from the tipping floor of the sort building. The septic system would be located at a low point of the site and would be constructed per septic and soil absorption bed standards for treating all wastewater from sinks, toilets, and any leachate. A pre-treatment system, such as an oil/water separator, and would also be installed. The design will meet DOH requirements for wastewater systems under Chapter 11-62, HAR. Post-construction, all development related runoff would remain on site and would be directed towards shallow drywells as required.			
Sustainability Objective: Increase the use of non-potable water systems for irrigation.			
134. Require installation of non-potable water systems for large developments.			X
135. Encourage and incentivize the collection of rainfall for non-potable use.	X		
136. Facilitate greywater reuse systems through code amendments and through partnering with DOH for regulatory changes and incentives.			X
Discussion: A water catchment storage tank would be used to meet fire safety standards.			
Sustainability Objective: Reduce sewage spill events. Achieve 100% of all priority area cesspools upgraded to a septic system or connected to a sewer system.			
137. Hawai'i County shall not allow municipal or private wastewater systems to negatively impact watershed quality or shoreline resources.	X		
138. Ensure municipal wastewater systems serve designated Urban Growth Areas with the capacity to accommodate projected population growth.			X
139. The Department of Environmental Management and the Planning Department shall coordinate priorities prior to the adoption of any new wastewater development or land use plans.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
140. Prioritize developing a multipronged approach to wastewater infrastructure funding, including proactively seeking grant funding for wastewater system expansion, improvements, and new development.			X
141. Enforce existing sewer hookup requirements.			X
142. Ensure wastewater fees reflect actual costs for service, maintenance, and future improvements.			X
143. Ensure that wastewater systems and improvements are designed and functioning to maximize system efficiencies, prevent accidental leaks or spills, and provide sanitary, reliable wastewater treatment that is not negatively impacting natural resources.	X		
144. Partner with the Department of Health to better monitor private wastewater resources and advance progressive wastewater technology and regulations.			X
145. Integrate stormwater and wastewater management into Department of Water Supply to strive for water resource management that is comprehensive and as efficient as possible.			X
Discussion: An individual wastewater treatment system, consisting of a septic tank and soil absorption bed, would be installed for the treatment and disposal of domestic wastewater and any potential leachate from the tipping floor of the sort building. The septic system would be located at a low point of the site and would be constructed per septic and soil absorption bed standards for treating all wastewater from sinks, toilets, and any leachate. A pre-treatment system, such as an oil/water separator, would also be installed. The design will meet DOH requirements for wastewater systems under Chapter 11-62, HAR.			
Sustainability Objective: Waste reduction, resource reuse and recycling are maximized to achieve 50% diversion of recoverable materials from landfills.			
146. The County shall proactively pursue funding that will ensure continued progression toward zero-waste goals.	X		
147. Optimize recoverable material diversion from landfill disposal by increasing percentage rates for diversion through waste reduction, recycling, and reuse.	X		
148. Develop and promote take-back programs for appliances and other difficult to dispose of materials.	X		
149. Composting at farms should be encouraged and facilitated.			X
150. Encourage salvage and reuse of building materials and elements when demolition is necessary or appropriate.			X
151. Support expansions to the organic material (green waste) recycling program to include drop-off and pick-up locations at all rural transfer stations.	X		
152. The County should consider EPA's Comprehensive Procurement Guideline program as a model for purchasing products that use materials recovered through recycling.			X
153. Continue to evaluate the feasibility of waste to energy technology.			X
154. Promote opportunities for a circular economy			X
Discussion: The proposed project involves repair and enhancement of an existing solid waste transfer station that is currently inadequate to meet the current and future needs of the surrounding communities. Improvements would ensure safety and regulatory compliance, and would reduce overall long-term maintenance and repair costs associated with continued operation of the transfer station.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Specifically, the improvements would provide enhancements for various collection areas including a recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; a future green waste area; a nets to energy collection area; and a sort building with dedicated tipping floor for residential and future commercial solid waste. Solid waste transfer stations play an important role in a community's overall waste management system. The proposed project would reduce the amount of trips the surrounding communities' residents would need to take to the nearest disposal site in the region, potentially enhancing their well-being and quality of life. Moreover, the improvements would allow for reduction and recycling which can significantly reduce the weight and volume of waste materials requiring disposal, which reduces transportation and landfill costs. Improvements would also include site improvements such as construction of internal roadways, a drainage system, an individual wastewater system, and utilities which would be designed to avoid or minimize any potential environmental impacts the project would have on the surrounding area.			
Sustainability Objective: Eliminate illegal dumping sites.			
155. Ensure that redesign plans for landfill and transfer stations provide adequate space for Resource Recovery (RR) Stations and ensure that new transfer stations are sited and developed with capacity for Resource Recovery. a. Resource Recovery Stations provide organic material (green waste) and recycling options b. All drop-off and transfer stations must be designed/redesigned with a flow pattern and educational signage.	**X**		
156. Ensure waste and resource recovery facilities and equipment do not harbor, spread, or introduce harmful or invasive species.	**X**		
157. Site new solid waste/resource recovery facilities in appropriate areas that serve the needs of population centers but that do not negatively impact the environment or surrounding neighborhood.	**X**		
158. Increase education programs for waste recovery options.			**X**
159. Reduce illegal dumping and littering through education programs and code enforcement.			**X**
Discussion: The proposed project is for repair and enhancement of an existing solid waste transfer station. Various collection areas would be provided including for Resource Recovery. Internal roadways would help to improve traffic flow patterns on-site. Educational signage would be provided where appropriate.			
Sustainability Objective: Reduce individual vehicle miles traveled (VMT) by 3% by facilitating walking, bicycling, and other energy-efficient and safe alternative modes of transportation.			
160. The County shall use performance targets, measures, and reporting to allow transparency for decision makers and the public as the County transitions to the Performance-Based Planning and Programming approach mandated by the US DOT and HDOT			**X**
161. There shall be coordinated planning of Federal, State, and County street systems to meet program goals of the other elements such as historic, recreational, environmental quality, and land use.			**X**
162. Plan for present traffic and future demands, including the programmed development of mass transit programs for high growth areas.			**X**

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
163. At a minimum, the County shall plan, site, and develop roads, bridges, and highways to: a. Protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss; b. Limit land disturbance such as clearing, grading and cut and fill to reduce erosion and sediment loss; and c. Limit disturbance of natural drainage features and vegetation, including mitigating impacts of stream crossings			X
164. Prioritize transportation investment to expand the multimodal transportation system			X
165. Evaluate all alternatives to preserve quality of life before widening roads.			X
166. Require new developments to contribute their pro rata share of local and regional infrastructure costs.			X
167. In planning, designing and constructing highway and road improvements, transportation agencies should balance conservation of the area's natural, historic and scenic qualities with transportation objectives. In some cases, it will be preferable to accept a lesser design speed or capacity in order to maintain the rural character and appearance of the Island.			X
168. Incorporate pollution prevention procedures into the operation and maintenance of roads, highways, and bridges to reduce pollutant loadings to surface waters.			X
169. Support designing all transportation facilities, including airport, harbor, mass-transit stations, etc., to reflect local and/or Hawaiian architecture			X
170. Promote transportation options to encourage the use of multimodal travel.			X
171. Develop an Asset Management Program aimed at utilizing maintenance plans for pavement, bridges and other road infrastructure to prolong the life of our transportation system as well as reduce its whole life cost.			X
172. Utilize transportation-demand management as an integral part of transportation planning.			X
173. Encourage civic participation in an Adopt-a-Street program where moderate landscaping and street cleaning can be done by community groups			X
174. Use the road improvement program in conjunction with the Asset Management program in developing priorities for the six-year Capital Improvement Program, including phased implementation.			X
175. Work with various non-profit agencies to coordinate transportation and multimodal opportunities.			X
176. Identify and evaluate transportation strategies to address energy and climate issues			X
177. Investigate various methods of funding transportation improvements, including private sector participation, to meet the growing transportation needs of the island. (Including but not limited to impact fees, taxes, fare adjustments, dedicated sources of funding, improvement districts, and assessments).			X
178. Support and provide technical assistance to assist in the development of 'road improvement districts' in order to finance road improvements.			X
Discussion: Sustainability objectives related to the reduction in vehicle miles traveled is not applicable to the proposed project.			

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Strive to achieve zero traffic deaths and serious injuries on County of Hawai‘i roadways.			
179. Prioritize interdepartmental coordination and accountability of traffic safety through education, enforcement, engineering, encouragement, and evaluation. Focus on systemic transportation changes rather than on individual behavior changes in improving road and pedestrian safety.			X
180. Commit to an equitable approach and outcomes, including prioritizing engagement and investments in traditionally under-served communities and adopting equitable traffic enforcement practices.			X
181. Develop a Freight Masterplan to focus on safe reliable cross island truck moment to support the County's economic development.			X
182. Improve public health and safety by reducing speeding-related fatalities and injury.			X
Discussion: Sustainability objectives related to achieving zero traffic deaths and serious injuries on County of Hawai‘i roadways is not applicable to the proposed project.			
Sustainability Objective: Achieve a roadway system that employs all modes of transportation for the safe, efficient and comfortable movement of people and goods across our island.			
183. Roadway designs and improvements shall accommodate pedestrian-friendly, multimodal design, and landscaping.			X
184. Prioritize roadway drainage improvements in flood-prone areas and incorporate Low Impact Development/Green Infrastructure strategies, as appropriate.			X
185. Ensure that roadway-design criteria and standards are compatible with surrounding neighborhoods and the character of rural areas.			X
186. Provisions for on-street parking shall be evaluated during the design of road systems.			X
187. Highways shall not be wider than four lanes and should be limited to the most populated areas typically connecting residential areas with employment centers.			X
188. Develop rural road standards to ensure appropriate levels of public safety.			X
189. Incorporate, where appropriate, bicycle routes, lanes, and paths within road rights-of-way in conformance with The Bikeway Plan for the County of Hawai‘i.			X
190. Use native landscaping for highway improvements and connectivity points, emphasizing the retention of native vegetation.			X
191. Landscaping shall be provided along streets where regular rainfall or reclaimed water are available for irrigation, and arid species or xeriscape landscaping shall be the preference where reclaimed water and rainfall are not available.			X
192. Street Standards a. Primary Arterial: Includes major highways and parkways that move vehicles in large volumes and at higher speeds from one geographic area to another; highest traffic volume corridor. Designed as a limited access roadway. Primary arterials shall have a minimum right-of-way of 120 feet b. Secondary Arterial: A street of considerable continuity that is primarily a traffic artery between or through large areas; interconnect with and augment primary system. Designed as a limited access roadway. Secondary arterials shall have a minimum right-of-way of 80 feet.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
c. Major Collector: Any street supplementary to the arterial street system that is a means of transit between this system and smaller areas; used to some extent for through traffic and to access abutting properties; collect and distribute traffic between neighborhood and arterial system. Major collectors shall have a minimum right-of-way of 60 feet. d. Local Streets-commercial/industrial: Local streets within commercial and industrial areas shall have a minimum right-of-way of 60 feet e. Minor Collector and Local Streets: Minor collectors are used at times as through streets and for access to abutting properties. The principal purpose of a local street is to provide access to property abutting the public right-of-way.			
193. All subdivisions, including condominium property regimes (CPRs) and planned unit developments (PUDs), shall conform to connectivity standards in HCC 23 of the Hawai‘i County Code to disperse traffic and integrate new development with the existing fabric of the community.			**X**
194. Prioritize intersection improvements with roundabout designs to incorporate safer access through intersections, steady flow of traffic, lower traffic speeds, and safer pedestrian crossings.			**X**
195. County of Hawai‘i roadway design standards should be updated and revised to accommodate pedestrian-friendly, multimodal design (including non-motorized facilities), future technologies, traffic calming design, and include low-impact development/green infrastructure strategies.			**X**
196. Incorporate traffic-calming features into highway design in preference to signage and signalization, where possible.			**X**
197. Incorporate Low Impact Development (LID) and green infrastructure strategies to address drainage in roadway design.			**X**
Discussion: Sustainability objectives related to the roadway system are not applicable to the proposed project.			
Sustainability Objective: Improve roadway connectivity to increase efficiency, walkability, and alternative routes for emergency access.			
198. The County shall establish a corridor planning/management program that is data driven and uses performance-based targets and outcomes to help prioritize various multimodal projects. Design and selection of these projects shall use a context sensitive process utilizing the various Community Development Plans as guidance to increase access to opportunity while promoting health and wellness through active transportation options.			**X**
199. The Bikeway Plan for the County of Hawai‘i (1979) shall be updated to include the development of a safe and usable bikeway system throughout the island; or incorporate the bikeway into an island wide comprehensive transportation plan			**X**
200. Develop alternative means of transportation to provide alternative mobility for minors, non-licensed adults, low-income, elderly, and people with disabilities.			**X**
201. Create a multimodal circulation network plan for each urban community to best direct future improvements and needs. This network plan could be created in coordination with a CDP process.			**X**
202. Develop intermodal connections to facilitate the transfer between modes of travel, such as Automobile/Transit and Bike/Transit Transfer. Transit stations or transit hubs and nearby park and ride facilities (including bicycle storage) must be built to ameliorate the traffic congestion in key urban centers.			**X**

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
203. Improve the integration of transportation and land use planning in order to optimize the use, efficiency, and accessibility of existing and proposed transit systems.			X
204. Designate new connectivity points for local traffic roads and create redundant routes for existing highways, utilizing existing routes where possible, that can also serve as emergency and evacuation routes.			X
205. Use traffic demand management to aide in reducing traffic congestion.			X
Discussion: Sustainability objectives related to roadway connectivity are not applicable to the proposed project.			
Sustainability Objective: Develop an island wide bridge maintenance program that clearly sets safety and functional priorities for bridge maintenance, improvements, and replacements.			
206. Maintain the unique features of historic bridges, while balancing safety needs and preserving historic and scenic character.			X
207. Prioritize the replacement of deficient and inadequate bridges and maintain pedestrian/bicycle access across bridges.			X
208. Design new bridges and bridge improvements to accommodate and not negatively impede identified scenic resources.			X
Discussion: Sustainability objectives related to an island wide bridge maintenance program are not applicable to the proposed project.			
Sustainability Objective: Achieve a reliable mass transit system that serves the transportation, employment and social needs of our County to attract a 50% increase in ridership.			
209. Prioritize expansions to the paratransit and shared ride taxi programs for the growing elderly and disabled populations to ensure equitable access to services is available for all.			X
210. Bus maintenance facilities shall be developed at or near transit hubs.			X
211. Transit infrastructure (e.g., bus stops, bus pullouts, waiting benches and shelters, signs) shall be adequate and upgraded along existing and future transit routes.			X
212. Identify, preserve, and/or acquire corridors for future transit use, including but not limited to multimodal corridors and require new development to provide rights-of-way (ROWs) to accommodate transit services.			X
213. Create transportation hubs and bus stops with amenities that provide riders comfort and safety and that help support community and village gathering places.			X
214. Facilitate the transfer between modes of travel, such as bike/transit transfer, and install racks on all buses to carry bicycles and surfboards, and develop bicycle lockers at transit hubs.			X
215. Maximize regular and paratransit service to the following: a. Town centers, commercial districts, and employment centers. b. Airports and cruise ship terminals. c. University and adult education centers			X

Table 4-5: County of Hawaiʻi Draft General Plan 2040	S	NS	N/A
216. Coordinate mass transit schedules and routes so as to accommodate school schedules such as after school activities and sports.			X
217. Public transportation is improved and expanded in communities with the highest socioeconomic needs, according to the Hawaiʻi Health Matters			X
218. The County's public transit system accommodates redeployment for emergency evacuations.			X
219. Develop a program to replace all fossil-fuel vehicles in the mass transit fleet with renewable energy alternatives.			X
Discussion: Sustainability objectives related to a reliable mass transit system are not applicable to the proposed project.			
Sustainability Objective: Improve airports, harbors and navigation aids to address recreational and tourism opportunities that serve passengers, freight movement and general transport.			
220. Future land uses in the vicinity of airports and harbors should have an adequate open space buffer and/or be compatible with the anticipated noise exposure and industrial nature in the vicinity.			X
221. Explore all options to protect the traditional, subsistence, and recreational uses of small boat harbors and mitigate harbor-upgrade impacts to uses where feasible.			X
222. Support the State's objectives to acquire rights within the runway clear-zones, limit heights within approach zones, and restrict noise-sensitive uses within designated noise contours determined by the State.			X
223. Encourage pedestrian-oriented gathering places around harbors and small boat harbors.			X
224. Explore and encourage appropriate reuse for former airport facilities.			X
225. Encourage economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats.			X
Discussion: Sustainability objectives related to airports, harbors, and navigation aids are not applicable to the proposed project.			
Sustainability Objective: Increase broadband options to provide affordable access to service all communities.			
226. Hawaiʻi County shall continuously improve County government's use of broadband communications and digital technology to educate and provide public services with a focus on digital access to County geographic information systems, health, permitting services, public safety, emergency communications, and to ensure that all County policies, plans, ordinances, departmental rules, and other jurisdictional information is available online.			X
227. Prioritize broadband access and seek to progressively improve speeds to keep pace with technological advances.			X
228. Hawaiʻi County shall advocate for and seek grant funding to support service diversity, redundant network capacity, and to provide improved communications to outlying rural areas and other underserved or unserved communities.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
229. Telecommuting and home-based businesses that rely on the internet shall be considered permitted accessory uses to residential uses when operated in compliance with cottage industry performance standards. [Land Use][Econ]			X
230. Hawai‘i County shall coordinate and collaborate with State of Hawai‘i Cyber Security Team of the Information & Communications Services Division to maintain and improve cyber security and informational security of telecommunication facilities.			X
231. Treat broadband access as a basic utility that is affordable, neutral, and available to all communities.			X
232. Encourage broadband infrastructure development for new multi-residential and commercial developments within the urban growth area.			X
233. Work with stakeholders to remove regulatory barriers and seek funding to completing the island's fiber optic loop in an environmentally and economically appropriate manner.			X
234. Continue active collaboration with State and Federal agencies under the State Broadband Initiative (SBI) to further telecommunication planning and funding initiatives, including: a. The American Recovery and Reinvestment Act of 2009 and other federal grant programs; b. State Broadband Data and Development Program (SBDD), administered by the National Telecommunications Information Administration (NTIA), c. Hawai‘i Department of Commerce and Consumer Affairs (DCCA), and the National Telecommunications Information Administration (NTIA)			X
235. Continue and seek to improve County's partnership role in the Hawai‘i Healthcare Transformation Initiative (HHIT) and implementation of the Healthcare Transformation Plan.			X
236. Pursue partnerships and funding for broadband initiatives and deployments by USDA/EDA a. Action Platform: Cool & Connected is a planning assistance program (pilot stage?) that helps community members develop strategies and an action plan for using broadband to create walkable, connected, economically vibrant main streets and small-town neighborhoods that improve human health and the environment. https://www.epa.gov/smartgrowth/cool-connected b. Action Platform: USDA's Rural Utilities Service (RUS) administers programs that provide much-needed infrastructure or infrastructure improvements to rural communities. https://www.rd.usda.gov/about-rd/agencies/rural-utilities-service			X
237. Work with the telecommunications industry to increase the availability of fiber, broadband, wireless, and emergency telephone service throughout the island.			X
238. When opportunities develop to negotiate telecommunication franchise agreements that involve the use of County rights-of-way or other assets, the County will seek to ensure providers include socially equitable service options to nearby communities.			X
239. Provide technical planning assistance to communities and community based organizations interested in offering communications services for public, education and government purposes.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
240. Develop and support a program of free, public-use broadband services at appropriate County-owned facilities and other community anchor institutions.			X
241. Include an analysis of the availability of telecommunication infrastructure with other basic utilities during appropriate planning processes.			X
242. Incentivize communications infrastructure improvements and expansion as a means to reduce transportation impacts.			X
Discussion: Sustainability objectives related to broadband communications are not applicable to the proposed project.			
Sustainability Objective: Reduce impacts and visual clutter of telecommunications infrastructure.			
243. Require concealment or screening strategies to minimize visual impacts of towers within views of scenic highways, public parks, cultural facilities, and coastal scenic areas. Concealment strategies and/or increased setbacks shall be used to ensure community compatibility. a. An alternatives analysis may be required at the time of application that documents why the proposed project is the best way to accomplish project alternatives while minimizing project impacts. b. Support structures shall be designed to minimize their visibility with a preference towards each of the following in the order so listed: i. use of existing structures, ii. stealth designs for concealment, and iii. monopoles. c. Component parts, equipment cabinets, buildings, and security fencing shall be designed to achieve a minimum profile through painting, screening, landscaping, and architectural compatibility with surrounding structures. d. Photo simulations or balloon tests with views from various vantage points may be required to show visual impact of the proposed facility. e. Hawai‘i County shall require the timely removal of communications towers and equipment that are no longer needed or in active use, as a condition of approval.			X
244. Siting of new communications facilities shall comply with the following standards: a. Performance Standards. Develop standards for siting design, visibility, construction impacts, noise, on-going operation, and other characteristics that affect the compatibility and environmental and safety impacts of proposed facilities. b. Site Co-location. When at all feasible, communications facilities shall be located adjacent to, on, or incorporated into existing or proposed buildings, towers, or other structures. The County shall require new facilities to accommodate future colocation to the maximum extent feasible.			X
245. Manage the environmental, cultural heritage, visual and social impacts of telecommunications infrastructure.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
246. Incentivize or require underground siting of electrical and telecommunications facilities within public rights-of-way, especially in urban centers and along designated scenic corridors.			X
247. Establish wireless and telecommunication design and siting standards to mitigate the visual impact of telecommunications and broadcast facilities.			X
Discussion: Sustainability objectives related to telecommunications infrastructure are not applicable to the proposed project.			
Sustainability Objective: The County of Hawai‘i should lead the State in reaching its goal of 100% renewable energy. (30% by 12/31/2020, 40% by 12/31/2030, 70% by 12/31/2040, 100% by 12/31/2045)			
248. Public utility facilities shall be designed to complement adjacent land uses and minimize conflict with the natural environment and minimize pollution.			X
249. The County shall remove barriers for energy systems that improve resiliency, such as microgrids, combined heat and power (CHP), backup generation and storage, and other decentralized electricity systems.			X
250. The County of Hawai‘i shall increase its energy efficiency by upgrading its vehicle fleet to alternative energy vehicles, where practical.			X
251. To encourage the use of electric vehicles, the County of Hawai‘i shall install electric vehicle chargers at community facilities in urban centers, for both County vehicles and public parking.			X
252. Maintain tax incentives for renewable energy improvements and continue to revise incentives as energy technologies progress.			X
253. The County shall advocate the Public Utility Commission in support of the following types of strategies and initiatives: a. Programs and fee structures that promote renewable energy; b. Consumer incentives to utilize renewable alternatives; c. Social Equity analysis of proposed energy projects to ensure residents are protected as energy consumers in regards to rates, grid planning, utility compensation, and energy project siting			X
254. Require special or use permits for all energy producing facilities that distribute power beyond their own use.			X
255. Increase the County of Hawai‘i’s role in ensuring energy facility production and distribution is adequate, efficient, and dependably available to each community to support present and future demands.			X
256.. Promote and support increased energy efficiency measures and the proportion of electricity generated by alternative and renewable energy, including, but not limited to solar, wind, biofuels and other sources.			X
257. Coordinate with energy providers to encourage investments that increase reliable, equitable, efficient, and affordable energy for Hawai‘i residents and businesses.			X
258. Continue to participate at the State level to provide feedback on all energy related initiatives and proposed revisions to comprehensive Integrated Resource Plans			X
259. Encourage energy efficiency designs in all new County facilities and upgrade existing facilities with energy efficient systems as practical.	X		

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
260. Continue to support building codes that require solar hot water and other energy efficient designs.			X
261. Encourage large developments to meets Leadership in Energy and Environmental Design (LEED), Low Impact Development (LID) or similar energy sustainability certification standards.			X
262. County strives for Leadership in Energy and Environmental Design (LEED), Low Impact Development (LID) or similar energy sustainability certification for new buildings or when renovating existing buildings for County use			X
263. Encourage use of technologies, techniques, and materials in building design, construction, and removal that result in the least environmental impact over the life cycle of the structure	X		
264. Increase the amount of electric vehicles used on the Island			X
265. Determine realistic targets for the appropriate mix of variable renewables and firm renewables within the energy network.			X
266. Partner with both government and private sources for research and development of alternative/renewable energy resources.			X
267. Support innovative heating and cooling technologies such as sea water cooling, heat pump technology, and low carbon systems that serve multiple buildings.			X
268. Support local training and education programs to develop green job growth; especially in renewable energy and natural resource management.			X
269. Support the development of commercially produced energy to meet the needs of the County of Hawai'i in a culturally sensitive manner.			X
270. Promote biomass energy and fuel production using wood chips from exotic/invasive trees.			X
271. Monitor and advocate for discounted off-peak electrical rates.			X
272. Encourage eco-districts, where multiple partners work together to achieve sustainability and resource efficiency goals at a neighborhood/district scale.			X
273. Encourage and promote development that uses renewable resources, such as solar, wind, and water to generate power on-site and to contribute to the energy grid.			X
274. Support renewable energy producing incentives through local utility programs such those developed for community-based renewable energy systems, customer grid supply, customer self-supply, smart export, interconnection agreements, net energy metering, and other similar incentives for independent energy producers.			X
Discussion: Photo-voltaic powered systems would be considered in the design of the facility where deemed feasible. Proposed structures would be constructed out of structural steel to reduce required long-term maintenance activities and costs. A portion of the project area would be reserved for the Nets to Energy program which collects marine debris that would be used later to provide energy though an off-site combustion process.			
Section 3: Economic & Opportunity Planning			
Sustainable Objective: Progressively increase percentage of residents that are economically self-sufficient.			
275. Prioritize economic diversity, stability, and innovation in County programs, plans, and research.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
276. Evaluate new business proposals for potential community and cultural impacts and negative impacts are identified and properly mitigated.			X
277. Eco-Industrial Parks shall be available to areas within the Urban Area zoned MG, ML, or MCX, to encourage the feasibility testing of the concept of an eco-industrial park, which is a community of firms that exchange and make use of each other's byproducts.			X
278. Invest in infrastructure and facilities that support economic development.			X
279. Promote sustainable business development opportunities focusing on diversified agriculture, educational and institutional research-based tourism, green technologies and building, and sustainable tourism.			X
280. Support subsistence-based businesses and economies and preserve opportunities to "live off the land"			X
281. Collaborate to expand the research, development, energy, and small and high technology industries.			X
282. Assist in the development of creative industries to market local sites and coordinate event activities.			X
283. Promote Hawai‘i Island as a center for natural scientific research.			X
284. Monitor trends and identify business needs, strengthen existing industries, and diversify the economy by attracting emerging industries.			X
285. Support education, training, and workforce development			X
286. Support apprenticeships and mentorships to strengthen the entrepreneurial skillsets and networks.			X
287. Collaborate with the private sector to identify business needs, strengthen existing industries, and diversify the economy by attracting new endeavors.			X
288. Partner with business associations, realtors, and the chamber of commerce to recruit small-scale manufacturers to establish retail locations in village and town centers to support reinvestment.			X
289. Partner with business associations, realtors, and the chamber of commerce to match potential tenants with local landowners.			X
290. Shared workspaces, including certified kitchens and industrial co-work buildings, are encouraged in appropriate locations.			X
291. Maintain a program for updating zoning code to accommodate emerging industries and technologies consistent with other goals, objectives and policies of this General Plan.			X
292. Partner with business associations, realtors, and chamber of commerce to remove regulatory barriers and create incentives for urban renewal, rehabilitation, and/or redevelopment programs in cooperation with communities, businesses and governmental agencies, instead of developing new commercial areas.			X
293. Promote use of the incentives offered by the opportunity zones and enterprise zones partnership programs to attract businesses.			X
294. Partner with business associations, University of Hawai‘i at Hilo, and other agencies and private entities to host local fairs, markets, and networking events in target communities.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
295. Plan for and identify appropriate areas for business incubation/innovation districts and industrial/ business parks.			X
296. Remove regulatory barriers that restrict entrepreneurial endeavors, such as zoning restrictions for home-based businesses that do not negatively impact the infrastructure network or the character of the neighborhood.			X
297. Encourage land uses that allow for small-scale manufacturers in retail establishments that enhance and are balanced with the County's natural, cultural, and social environments.			X
298. Encourage partnerships that leverage existing infrastructure and financial resources as well as projects that provide for additional infrastructure resources desirable for development of sustainable local industries.			X
Discussion: Sustainability objectives related to economic self-sufficiency are not applicable to the proposed project.			
Sustainability Objective: Increase locally owned and operated agricultural businesses.			
299. In order to provide a means for local agricultural producers to market their products, the County shall interpret HRS 205 liberally to allow the establishment and continued operations of open farmers' markets and road-side stands in the State Land Use Agricultural district without a Special Permit. If the project qualifies for Plan Approval, a market management plan containing provisions for adequate on-site parking, on-site and off-site traffic management, and adequate sanitation facilities must be approved by the Planning Department prior to the operation of the open farmers market.			X
300. Educate landowners about agriculture, ranch, and forestry land preservation programs and encourage participation in these programs.			X
301. Assist in the expansion and promotion of the agricultural industry through the protection of viable and productive agricultural lands.			X
302. Partner with appropriate state and federal agencies, and other groups for programs, training, and building community capacity in the promotion of the agricultural industry.			X
303. Support the development and stability of marketing plans, programs, cooperative groups, and other networking organizations that promote the agricultural industry.			X
304. Support the development of private and state agricultural parks to make agricultural land available for agricultural activities.			X
305. Support the University of Hawai‘i at Hilo and Hawai‘i community college aid in their development of education, training, and workforce development programs that assist agriculture.			X
306. Support apprenticeships to strengthen the skillset and networks of industry leaders.			X
307. Incentivize small-scale farming, such as taro production, through expanded tax credits for small farms.			X
308. Support the sustainable development of the fishing industry, various forms of aquaculture, and other fresh and marine-based activities			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
309. Support research and development of viable biofuel projects that will supply renewable transportation fuels or power for Hawai‘i Island in ways that are community-supported, sustainable, ecologically sound, and complimentary to food production.			X
310. Promote operations that utilize local materials and secondary byproducts from agriculture, agroforestry, silviculture, and aquaculture.			X
311. Promote the development of a local timber industry through support of timber processing and building code flexibility for locally produced building products.			X
Discussion: Sustainability objectives related to agricultural business are not applicable to the proposed project.			
Sustainability Objective: Increase total acres of active food production.			
312. Develop and maintain a food self-sufficiency strategy for Hawai‘i County to serve as a mitigation and adaptation strategy that decreases Hawai‘i’s food carbon footprint (via imports) while increasing community resilience to climate and natural hazards.			X
313. Prioritize restoration of traditional agricultural uses.			X
314. Increase public-private partnerships to strengthen the local food system.			X
315. Reduce County greenhouse gas (GHG) emissions by improving food system waste management			X
316. Support training related to the requirements of the food safety modernization act			X
317. Support the development of community-based food systems.			X
318. Allow for and encourage urban agriculture uses such as on-site sales and small-scale animal husbandry.			X
Discussion: Sustainability objectives related to food production are not applicable to the proposed project.			
Sustainability Objective: Increase availability of infrastructure (agricultural water, transportation systems for product and equipment access, and packing and processing facilities for ranching, agricultural crops, timber, and value-added products) to areas of high agricultural production.			
319. Support the creation of water cooperatives supported with County revenue bonds and other sources. Cooperative users should be responsible for development, maintenance and repair of the agricultural water systems.			X
320. Where the County has replaced surface water sources with groundwater sources to meet Safe Drinking Water standards, the County should consider allocating the surface water sources for agricultural use.			X
321. Support expanding the capacity of air and sea port facilities and staffing for the exportation of agricultural crops.			X
322. Promote agricultural processing, including the development of non-profit or private commercial kitchens, processing, storage, and distribution facilities, using existing facilities as appropriate for the development of value-added local products.			X
323. Support the continued operation of the USDA’s Pacific Basin Agricultural Resource Center facility.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
324. Incentivize and remove barriers to allow the agricultural industry to provide or develop employee housing and workers quarters.			X
325. Evaluate code and statutory amendments to allow agricultural worker housing to be developed without requiring the housing be sited on the same parcel (TMK) of the working subject farm.			X
Discussion: Sustainability objectives related to infrastructure for agricultural production are not applicable to the proposed project.			
Sustainability Objective: Increase visitor expenditure or length of stay.			
326. Encourage, where appropriate, the establishment of visitor-related uses and facilities that directly promote the agriculture industry.			X
327. Support the promotion and development of programs, festivals, and events that engage visitors and residents in unique and authentic ways			X
328. Support the development of a place-based tourism industry that emphasizes the preservation of our unique cultural, natural, and built environment assets			X
Discussion: Sustainability objectives related to visitor expenditures or stays are not applicable to the proposed project.			
Sustainability Objective: Increase in number of newly constructed housing units (1,300 du/year to reflect needed housing units referenced 2014 Rental Housing Study).			
329. Hawai‘i County shall expand its participation in Federal, State, and Hawaiian housing assistance programs to rehabilitate owner and rental housing for very low, low, median, and moderate income residents by seeking grants, loans, and technical assistance in conjunction with public and private stakeholders.			X
330. Maintain an affordable housing and property inventory system consistent with 201H-6 HRS			X
331. All affordable housing projects which receive development benefits from Hawai‘i County, including but not limited to land use/ zoning approvals, special approvals, conditional uses, and density bonuses, shall be required to maintain the project (or portion thereof) as affordable for a period of 40 years pursuant to deed restrictions or other mechanisms specified in the HCC.			X
332. Affordable and transitional housing shall be prioritized on vacant urban land already zoned for multifamily development and around transit hubs.			X
333. Limit the locations of government facilitated or mandated affordably priced housing units to Urban Service Areas.			X
334. Partner with Federal, State, and nonprofit housing entities and housing trusts to fund and support community-based non-profit organizations in their efforts to provide adequate affordable housing.			X
335. Incorporate reasonable flexibility in codes and ordinances to achieve a diversity of socioeconomic housing mix and to permit aesthetic balance between single-family residential structures and open spaces.			X
336. Support collaborative partnerships that address homelessness, work toward immediate solutions to house and service homeless populations and work toward long-term strategies to reduce homelessness.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
337. Encourage use permits for innovative and experimental housing types to address homelessness, temporary, and transitional housing located close to services, job centers, transit hubs.			X
Discussion: Sustainability objectives related to increasing housing units is not applicable to the proposed project.			
Sustainability Objective: Increase in various housing types.			
338. Require residential and mixed-use developments to incorporate a variety of housing types within a single development project.			X
339. Support the development of a variety of housing types, uses and models, including experimental housing and compact housing communities. (Ex: modular/pre-fab; work/live arrangements; co-housing, limited equity cooperatives, etc.)			X
340. Incentivize the development of compact and energy efficient housing types that minimize use of resources such as smaller detached homes, accessory dwellings, and attached homes.			X
341. Encourage housing construction to take into consideration the need for ADA accessible housing as well as the needs of the growing elderly population who have mobility impairments			X
342. Consider broadening current real property tax reductions or exemptions as financial incentives for a private property owner’s provision of a certifiable affordable housing rental unit as a second dwelling unit where allowable			X
Discussion: Sustainability objectives related to increasing housing types is not applicable to the proposed project.			
Sustainability Objective: Eliminate housing determined to be structurally unsound.			
343. Hawai‘i County shall develop minimum standards for structural safety and coordinate to monitor and inventory housing conditions. Standards for evaluation of the structural condition of the housing stock are summarized below: a. Sound: Most housing units in this category are in good condition and have no visible defects. However, some structures with slight defects are also included. b. Deteriorating: A housing unit in this category needs more repair than would be provided in the course of regular maintenance, such as repainting. A housing unit is classified as deteriorating when its deficiencies indicate a lack of proper upkeep c. Dilapidated (Substandard): A housing unit in this category indicates that the unit can no longer provide safe and adequate shelter or is of inadequate original construction including being constructed below the minimum required elevation by FEMA or the County’s Floodplain Regulations.			X
Discussion: Sustainability objectives related to eliminating structurally unsound housing is not applicable to the proposed project.			

Table 4-5: County of Hawaiʻi Draft General Plan 2040	S	NS	N/A
Section 4: Community Placemaking			
Sustainable Objective: Increase the opportunities for collaboration with State and community organizations on community events at school facilities.			
344. Partner with State and community organizations to ensure that school facilities, including their surrounding area open spaces, are community-centered, designed for multiple uses as appropriate (aka: joint-use facilities) and serve as anchor institutions in the community			X
345. Design enrollment guidelines for new schools are: a. Elementary (preK-5) 400 to 750 students 8 to 15 usable acres b. Middle (6-8) 500 to 1,000 students 15 to 20 usable acres c. High (9-12) 800 to 1,600 students 45 to 55 usable acres In existing urban areas where the availability of land is limited to infill sites and where new housing developments require the construction of new school facilities, design enrollment guidelines for new schools are: d. Elementary (preK-5) 400 to 750 students 2.5 to 3 usable acres e. Middle (6-8) 500 to 1,000 students 5 to 6 usable acres f. High (9-12) 800 to 1,600 students 8 to 10 usable acres			X
346. School sites are identified in master plans for all new town developments or major expansions to ensure coordination with roads, water, sewer and recreations infrastructure and other support facilities and considerations such as traffic and safety, and access for vehicle, bicycle, and pedestrian.			X
347. Establish and maintain joint-use of public facilities in close proximity to each other, including: schoolyards, parks, libraries, and other public facilities for community use for recreational, cultural, and other compatible uses.			X
348. Support the continued expansion of the University of Hawaiʻi at Hilo and Hawaiʻi Community College campuses, including the creation of satellite campuses.			X
349. Coordinate with the State Department of Education to develop public schools in underserved communities.			X
350. Advocate to the State to locate its community facilities, such as public schools and libraries, in designated village/town centers, and to design them to be compatible with the existing village/town center.			X
351. Encourage the Hawaiʻi State Library System to establish a public library in underserved communities.			X
352. Support the development of Charter and other public schools to meet district needs and consistent with adopted school siting criteria.			X
353. County should develop master plans and consider land use designations surrounding existing educational campuses outside of urban areas for residential and commercial support uses.			X
354. School buildings should be designed, or at times retrofitted, to serve as emergency shelters.			X
355. Facilitate the use of libraries as a means to disseminate public information and engage civic participation, and to site libraries or satellite facilities for convenient access to all age groups and disabilities.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
356. Advocate to the State and private agencies to use existing and new facilities to offer place-based and distance education opportunities to adults.			X
Discussion: Sustainability objectives related to community events at school facilities are not applicable to the proposed project.			
Sustainable Objective: Increase the participation in Safe Routes to School program.			
357. Prioritize the development of sidewalks, pedestrian walkways, and bike paths around school complexes to increase walkability and pedestrian safety for a range of users.			X
358. County shall develop a master plan for Safe Routes to Schools for a 1-2 mile radius around existing and proposed schools and shall require new developments in the vicinity of schools to provide safe pedestrian facilities and additional school zone signage.			X
359. Implement a Safe Routes to School (SR2S) programs for all schools.			X
360. Private and public college campuses should be master-planned to approve appropriate scales of residential, commercial and minor light industrial uses (e.g., storage)			X
Discussion: Sustainability objectives related to the Safe Routes to School program are not applicable to the proposed project.			
Sustainable Objective: Police personnel increase to a minimum of 1.6 per 1,000 residents			
361. Crime Prevention through Environmental Design (CPTED) shall be incorporated into village design guidelines.			X
362. Maintain and improve rural police service ratios adjusted for geographic distance travel times to provide adequate service response.			X
363. Maintain police staffing to 2.5 police officers per 1,000 residents in all districts.			X
364. Police headquarters shall be near the geographic center of the service area and near concentrations of commercial and industrial use.			X
365. Police stations in outlying districts shall be based on the population to be served and response time rather than on geographic district.			X
366. Support the development and expansion of community policing programs, including neighborhood and farm watch programs in urban, rural and agricultural communities.			X
367. Enhance security and orderliness in downtown areas through Business Improvement Districts or other organizational tools, and partner with downtown businesses.			X
Discussion: Sustainability objectives related to police personnel are not applicable to the proposed project.			
Sustainability Objective: Achieve 100% of on time fire and emergency response times			
368. The establishment of a fire/police facility shall consider site size and locations that permit quick and efficient vehicular access.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
369. Establish a minimum level of service for fire stations to provide a response time of 8 minutes in Urban Areas and 12 minutes in the rural areas.			X
370. Rescue services should be provided by ground and sea by at least one station in each district and maintain an appropriate number and type of emergency helicopters, including appropriate aero medical capabilities.			X
371. Ensure HazMat service in each district.			X
372. Prioritize securing 4x4 emergency vehicles for service in remote communities.			X
373. The County shall maintain staffing for a Board of Appeals for the Fire Department (Hawai‘i County Code 26-3) to ensure public concerns are addressed and there is an adequate mechanism to increase transparency and consistency in the application of the Fire Code as per Section 26-6.			X
374.. All fire stations should provide Emergency Medical Services (EMS).			X
375. Development of police and fire facilities should entail joint-use structures whenever feasible.			X
376. Support and expand volunteer fire facilities and capacity			X
377. Lifeguard stations should be located at all County and State beach parks.			X
378. Support code amendments that address fire safety issues while also accommodating flexibility in design and provisions for alternate water sources when adequate public water is not available.			X
Discussion: Sustainability objectives related to fire and emergency response are not applicable to the proposed project.			
Sustainability Objective: Each community has access to healthcare facilities, programs, or community-based care.			
379. Ensure that hospitals are sufficiently hardened to remain in effective use through natural disasters.			X
380. Support the establishment or expansion of community health centers, rural health clinics and mobile clinic services for the medically underserved population, especially in rural areas.			X
381. Advocate for programs serving the elderly, disabled, and homeless persons.			X
382. Support the establishment of centrally-located, 24-hour, full-service medical facilities, with trauma care, to service rural areas.			X
383. Serve as a point of community access for information and referral for health, education, and social services.			X
384. Support the establishment of home and community-based care			X
Discussion: Sustainability objectives related to healthcare facilities, programs, or community-based care are not applicable to the proposed project.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Reduce substance abuse, domestic violence and other social problems through social programs, education, and intervention services.			
385. Partner with State and private service providers to develop a consolidated services facility plan for victim and offender treatment, counseling and other rehabilitation services (and other social services) in major urban centers (Hilo, Kailua-Kona, Waimea).			X
386. Correctional facilities should emphasize rehabilitation and coordinate programs and partnerships to successfully reintegrate individuals back into society.			X
Discussion: Sustainability objectives related to social programs, education, and intervention services are not applicable to the proposed project.			
Sustainability Objective: Every resident of Urban Service Areas are within a 10-minute walk to a quality park.			
387. Maintain and/or improve park facilities and programs based on community needs assessments to ensure County services are meeting the social, recreational, and activity needs of our communities.			X
388. Implement a proactive maintenance program to ensure that park facilities and trails are safely maintained for optimum usage.			X
389. Facilitate and prioritize the co-location of schools, parks, and senior centers to promote interactivity between community members of all ages.			X
390. Prioritize maintenance and necessary improvements at existing park facilities over developing new park facilities within each district (this does not preclude accepting lands for future park development or acquiring properties for the intent of preserving open space, scenic areas, natural hazard areas, or cultural/historic areas from development).			X
391. Continue to improve parks and recreation outreach efforts to ensure program and facility information is adequately available, promoted online through accessible websites and through other mediums, and kept up-to-date to facilitate maximum community participation.			X
392. Prioritize park acquisition and improvements that involve under-represented open recreation and healthy living activities (outside the scope of organized sports), such as: a. Walking and biking trails; b. Skate/roller blade parks; c. Dog-friendly parks; d. Parks that offer camping opportunities; e. Botanical and community garden parks, pocket and art parks; f. Equestrian/rodeo arenas; g. Archery and shooting ranges; h. ATV and motorized recreation areas; i. And other types of active and passive recreation that enhance the quality of life for visitors and residents.			X
393. Existing and new parks are designed with features that accommodate and encourage meaningful levels of physical activity according to level of service criteria.			X

Table 4-5: County of Hawaiʻi Draft General Plan 2040	S	NS	N/A
394. Recreational facilities should be planned and located where they will best facilitate and support active-living communities.			X
395. Partner with State, Federal, and private entities to increase funding sources for park, recreation, and trail development and maintenance.			X
396. Encourage the State to continue with the establishment of Kekaha Kai State Park reaching into Mahaiʻula, Awakeʻe, and Maniniʻōwali Ahupuaʻa.			X
397. Seek to combine recreation facility improvements projects with other needed facility improvements (e.g., ADA improvements with facility hardening, etc.)			X
398. Partner with and initiate joint agreements with State, Federal, and private entities for funding, management, and maintenance for recreation and public access priorities.			X
399. Support and enhance recreational facilities by developing additional recreational offerings in underutilized areas of County properties, such as the Panaʻewa Recreation Complex.			X
400. Consider amending Hawaiʻi County Code Section 23-26 to develop criteria for assessing community needs and allow flexibility for park types to include open space areas, green space (buffers) and allowances for the publicly dedicated lands to be used as community gardens, art parks, etc.			X
401. Establish, in cooperation with the State Department of Education, joint-use of schoolyards, County parks, and other public facilities for community use for recreational, cultural, and other compatible uses.			X
Discussion: Sustainability objectives related to quality park facilities are not applicable to the proposed project.			
Sustainability Objective: Existing and all new regional urban centers include multi-use natural open space and corridors.			
402. Establish topographically-sensitive active living corridors throughout portions of the urban centers.			X
403. Active living corridors should be where: (i) travel way gradients are low enough to be appropriate for general recreational and bike/pedestrian commuting purposes, and (ii) infill development and/or urban core extensions are planned.			X
Discussion: Sustainability objectives related to multi-use natural open space and corridors are not applicable to the proposed project.			
Sustainability Objective: Number of public access sites created through acquisition or easement or enhanced with assistance from CZM funding or staff.			
404. The County of Hawaiʻi shall establish: public access to and along the shoreline to significant historic sites, public transit along the top of cliff, streams and other natural water courses, mauka trails, facilities, and access to sites for gathering, hunting, and other recreational purposes and in accordance with Hawaiʻi County Code Chapter 34.			X
405. Subdividers of six or more lots, parcels, units, or interests shall be required to dedicate land for public access for pedestrian travel from a public highway or street to the land below the high-water mark on any coastal shoreline or to areas in the mountains where there are existing facilities for hiking, hunting, fruit-picking, ti leaf sliding, and other recreational purposes, and where there are existing mountain trails			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
406. Prior to disposing of, leasing, or transferring public lands, including public roads or trails, public access potentials shall be assessed, documented and protected if public access use is in the public's interest.			X
407. Ensure that publicly owned historic trails and roads are properly identified, and consultation occurs to protect the public's interests.			X
408. Alignment of coastal trails shall consider flexibility for realignment for sea level rise and other dynamic shoreline changes.			X
409. Determine the location and ownership of historic trails and roads as early as possible in the land use application process.			X
410. Where a subdivision is traversed by a natural water course, drainage way, channel, or stream, the Planning Director should require a pedestrian, equestrian, and/or bicycle path when the opportunity exists to connect to existing or future drainage or trail corridors.			X
411. Trails may also be used as emergency access routes, where appropriate.			X
412. Support the development of a Rails to Trails type program to facilitate the conversion of old railway segments to a public trail network.			X
413. Seek private-public partnerships to manage and maintain public access to the shoreline, public trails, hunting areas, scenic places and vistas, and significant historic sites, buildings, and objects of public interest.			X
414. Explore options and collaborate with community groups to increase access to former sugar cane roads to be used as non-motorized trails where feasible and appropriate.			X
Discussion: Sustainability objectives related to public access sites are not applicable to the proposed project.			
Sustainability Objective: Develop and maintain a public access program that integrates recreation, subsistence, and cultural access priorities.			
415. Integrate Public Access into County department priorities in the following ways: a. Incorporate public access and development into a program overseen by the Planning Department as per Chapter 34. b. Integrate PONC property management and maintenance into the Parks and Recreation code in Chapter 2: Article 11 and Chapter 15: Parks and Recreation. c. Develop adequate staff to carry out the provisions of Chapter 2 Article 42, relating to the PONC maintenance fund (as per: Section 2-214.2 (b). Pursuant to section 10-16(c) of the Charter, the maintenance fund shall be administered and managed by the department of parks and recreation. Adequate staff to carry out the provisions of this article and section 10-16 of the Charter shall be provided in the department of parks and recreation.			X
416. Integrate County public access priorities in all aspects of land use decisions and permit reviews.			X
417. Consistently integrate public access development and maintenance into Parks and Recreation department priorities.			X
418. Support facility development for access management at access points and along trail corridors.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
Discussion: Sustainability objectives related to development of a public access program are not applicable to the proposed project.			
Sustainability Objective: Native Hawaiian language, values and practices are integrated into all County processes.			
419. Ensure Native Hawaiian access rights are clearly expressed in County code, policies, and procedures.			X
420. Protect all rights, customarily and traditionally exercised for subsistence, cultural, and religious purposes and possessed by ahupuaʻa tenants who are descendants of Native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.			X
421. Prioritize and maintain an education and awareness program for County employees regarding Native Hawaiian culture, values, and resource management			X
422. County shall staff include qualified personnel versed in Hawaiian language, Hawaiian history, and historic preservation to provide dedicated expertise in support of the objectives, polices, and actions stated in this plan			X
423. Ensure access for cultural practitioners in areas that may not be appropriate for public access (e.g. Burial sites, specific heiau).			X
424. Support festivals and events that promote Native Hawaiian history and culture			X
425. Support the development a multi-sector public education program regarding historic sites that target the hospitality industry, real estate agents, site developers, consultants, schools, youth groups, civic organizations, etc.			X
Discussion: Sustainability objectives related to Native Hawaiian language, values, and practices are not applicable to the proposed project.			
Sustainability Objective: At least one yearly cultural event is supported by the County in each district.			
426. Support festivals and events that promote the island’s multi-cultural heritage			X
427. Represent Hawai‘i as a place that embraces not only its own multi-cultural heritage, but all world cultures in inclusive and celebratory ways.			X
428. Promote educational and celebratory opportunities for cultural exchanges with other world cultures.			X
429. Promote opportunities for ‘sister city’ and other types of place-based cultural enrichment opportunities with international communities.			X
Discussion: Sustainability objectives related to cultural events are not applicable to the proposed project.			
Sustainability Objective: Achieve 100% preservation of sites identified for preservation by State Historic Preservation Division.			
430. Historic Preservation shall represent the full range and diversity of the multi-cultural heritage of Hawai‘i Island.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
431. The County shall maintain an inventory of significant cultural and historic sites and districts compatible with that of the State Historic Preservation Division. The inventory shall identify the location of sites on the Hawai‘i and National Register, the State Inventory of Historic Places, and may also include sites of community significance identified as being: a. Important in the life or activities of a major historic person; b. Associated with a major group or organization in the history of the island or community; c. Associated with a major historic event (cultural, economic, military, social, or political); d. Associated with a past or continuing institution that has contributed substantially to the life of the community; e. Unique example of a particular style or period; f. One of the few of its age remaining; g. Original materials and/or workmanship that can be valued in themselves; h. Sites with a preponderance of original materials in context and complexes rather than single isolated sites unless they are of great significance; and i. Sites of traditional and cultural significance.			**X**
432. Preservation plans shall be completed for all subdivisions with cultural or historical properties (sites, buildings, objects, landscapes) identified for preservation prior to approval of the final plat map or any site work			**X**
433. The County shall develop a comprehensive management plan for historic and cultural resources that are on County owned properties or on properties managed by the County.			**X**
434. Require completion of preservation plans for all significant sites identified for preservation.			**X**
435. Require completion of mitigation plans for identified sites, or resources that have been identified as historic but will not be preserved.			**X**
436. Require stewardship and/or protection of sites, buildings, objects, and landscapes of significant cultural and historical importance to the County.			**X**
437. Partner with DLNR-SHPD to outline how each agency will cooperate to ensure historic and cultural protections, verify that approved Preservation Plans are being implemented, and promote appropriate restoration of historic sites and cultural landscapes.			**X**
438. Through the Hawai‘i County Cultural Resources Commission, the County shall engage in consultation with Section 106, National Historic Preservation Act, and shall use this opportunity to engage the community, especially those with generational and traditional environmental knowledge, in the consultation process.			**X**
439. Subdivisions subject to cultural or historic surveys shall have all sites approved for preservation, including any required buffers or access easements, identified on the plat maps of the subdivision prior to granting of final subdivision approval. The metes and bounds descriptions of the preservation easements and all applicable covenants and restriction pertaining to the preservation easements, shall be added to applicable deeds prior to the transfer of subdivided properties.			**X**

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
440. Outstanding natural or cultural features, such as scenic resources, water courses, fine groves of trees, heiau, and historical sites and structures, shall be identified and preserved during subdivision.			X
441. The County shall use and promote the use of interpretive signage and/or other appropriate methods to recognize landscapes, sites, buildings, and objects of significant historical and cultural importance.			X
442. Partner with Community Development Plan Action Committees and the Cultural Resource Commission to develop design guidelines for designated communities containing significant historic buildings, sites, or landscapes.			X
443. Partner with DLNR's State Historic Preservation Division to increase, maintain, and regularly update the State inventory of Historic Places database with significant historical and culturally important sites, buildings, objectives, and landscapes on Hawai‘i Island.			X
444. Seek private-public partnerships to maintain and steward the preservation of sites, buildings, objects, and landscapes of significant cultural and historical importance.			X
445. For new County community facilities, incorporate and consider cultural design elements appropriate for the region.			X
446. Establish Historic Districts, Heritage Landscapes, Corridors, Areas, and Centers as land use designations for purposes of preserving, conserving, or restoring historic properties for the benefit of communities' sense of place and appropriate adaptive reuse for future generations.			X
Discussion: For the subject EA, Honua Consulting prepared an Archaeological LRFI report for the proposed project to identify and analyze resources. No potential archaeological sites were observed during field inspections. However, no sub-surface archaeological investigations have been conducted at the project site to assess the potential for cultural deposits to exist. Therefore, it was recommended that an archeological monitoring program is conducted in accordance with HAR 13-279 to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the proposed project. DEM will also consult with SHPD through the grading permit process in compliance with State historic preservation review requirements to determine appropriate mitigation measures for the project.			
Sustainability Objective: Increase participation in scenic preservation programs (Heritage Corridors, Scenic Byways, Scenic Corridors and Exceptional Trees)			
447. Hawai‘i County shall use the following place types as guidelines for designating sites and viewsheds that shall be protected: a. Distinctive and identifiable landforms distinguished as landmarks and/or cultural landscapes, e.g. Mauna Kea, Waipi'o Valley. b. Coastline areas of striking contrast, e.g. Laupāhoehoe Point c. Vistas of distinctive features d. Natural or native vegetation attractive to a particular area. e. Landscapes that are harmoniously developed, enhanced by man while maintaining their natural appearance, e.g. Pu'ukoholā, ‘Akaka Falls. f. Lands with a general slope of 20 percent or more that provide open space amenities or possess unusual scenic qualities.			X
448. Visual impact assessments shall include photo simulations or balloon tests with views from various vantage points to show visual impact of a proposed project			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
449. Prioritize maintaining the views at scenic overlooks with a frequently maintained vegetation management program which includes eradication of invasive species. Coordinate this work with regular roadway vegetation management maintenance program.			X
450. Maintain a continuing program to identify and inventory exceptional trees, forest areas, or groves/stands of trees.			X
451. Maintain the Exceptional Tree Program for the recognition and protection of trees with significant or unique historical, ecological, cultural and/or aesthetic significance.			X
452. No variance shall be granted unless appropriate conditions are imposed to minimize adverse impacts on public views to, from, and along the shoreline			X
453. Do not allow incompatible development in areas of natural beauty that have been identified through the Scenic Resources Protection Program.			X
454. Applications for Special Permits and environmental assessment reports for proposed changes of zone on property that may impact open space, viewsheds, and areas of natural beauty shall include visual impact assessments and propose conditions to mitigate scenic impacts			X
455. Hawai'i County shall seek to minimize, any development which would substantially interfere with or detract from the line of site toward the sea from the State highway nearest the coast.	X		
456. Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.			X
457. Preserve roadway corridors that have historic, scenic, or unique physical attributes that enhance the character and scenic resources of communities			X
458. Support the development and promotion of Heritage Corridors and Scenic Byways where appropriate.			X
459. Support the designation of scenic byways through the State Scenic Byway Program.			X
460. In reviewing Special Permit applications, rezoning, and other land use changes in the Agricultural District, appropriate conditions should be determined to preserve existing viewsheds to and along the coastline.			X
Discussion: The proposed project would not affect coastal views in the vicinity of the project area. The proposed project involves repairs and enhancements to an existing transfer station, which is screened from the existing highway by vegetation. Waiʻōhinu Transfer Station is located inland and away from the coast. As such, the project would not adversely affect existing public views to and along the shoreline. Waiʻōhinu Transfer Station is presently visible only from areas that are a significant distance away on the upper slopes mauka of the transfer station.			
Section 5: Land Use Planning			
Sustainable Objective: Ensuring land use compatibility.			
461. Plan approval and related conditions shall consider forest and coastal ecosystems, agricultural lands, open space, viewscapes, areas of natural beauty, archeological and historic sites, and historic buildings when assuring that proper siting is provided for, proper landscaping is provided, unsightly areas are properly screened or eliminated, and natural and man-made features of community value are preserved.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
462. The County shall reevaluate projects for consistency with the General Plan and applicable Community Development Plans during review of time extension requests for discretionary approvals.			X
463. Require a study of the significant cultural, social and physical impacts of large developments prior to approval.			X
464. Zoning requests shall be reviewed with respect to General Plan designation, district goals, regional plans, State Land Use District, compatibility with adjacent zoned uses, availability of public roads and services, utilities, and public need.			X
465. Focus higher density residential and commercial areas in communities that can sustain a higher intensity of uses and where these residential and commercial uses are consistent with the existing town character.			X
466. Zoning may be recommended on an incremental basis depending upon construction schedule, development of supporting services and facilities, and other pertinent factors bearing upon the performance of the petitioner.			X
467. Proactively allocate zoning as per Urban Growth Areas and Urban Service Areas to facilitate preferred land use development.			X
468. The County should carefully evaluate and condition, as appropriate, any rezoning that would negatively impact agricultural lands or culturally, visually and environmentally important open spaces or resources.			X
469. Applicable ordinances should be reviewed and amended as necessary to include considerations for urban design, aesthetic quality and the protection of amenities in adjacent areas through landscaping, open space and buffer areas.			X
470. In those cases where provisions of the zoning and subdivision code are inconsistent with the character of surrounding neighborhoods, variances or PUDs that maintain consistent village/town character should be encouraged.			X
471. Explore innovative methods to reduce property speculation, such as elevated tax rates associated with rapid resale, and/or district-wide rezoning.			X
Discussion: Sustainability objectives related to ensuring land use compatibility are not applicable to the proposed project.			
Sustainability Objective: Increase residential density within Urban areas to an average density of 10 units per acre and increase the mixed use development pattern.			
472. The Urban Growth Areas shall have a regulatory boundary that is intended to separate land uses from Agriculture or Rural. Areas that are clearly beyond the designated Urban Growth boundaries shall be preserved as Rural or Agricultural lands to maintain open space, scenic view planes, and natural beauty areas.			X
473. Do not allow strip or spot commercial development on the highway outside of designated urban areas			X
474. Provide adequate access for multi-family residential projects to arterial streets, shopping facilities, schools, employment centers, and other services. Multi-family residential areas shall be located in such a manner that traffic generated by high density development will not be required to travel through areas of lesser density to access principal community facilities.			X
475. Major traffic routes shall not be located through single-family residential areas			X
476. No new single-family residential lots should have direct vehicular access from major streets.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
477. Multi-family residential development shall not be permitted in high risk hazard areas unless proper on-site improvements are provided.			X
478. Multi-family residential development shall be located in areas where public utilities can be economically provided at a level adequate to meet the demand for the concentrated service.			X
479. Proposed designations for new commercial community centers shall include a market study to demonstrate the proposed center is necessary to meet neighborhood, community, and regional needs.			X
480. Within the "medium-density" area, commercial development shall be focused on major streets, while interior blocks should be zoned primarily for single and multifamily residential use.			X
481. Waimea is the regional commercial center for northern Hawai‘i.			X
482. Standards: There are three basic types of commercial centers: a) Neighborhood Centers 1) Provide: Convenience goods, e.g., foods, drugs, and personal services. 2) Major Shops: Supermarket and/or drug store. 3) Number of Shops: 5 to 20. 4) Approximate Market: 3,000 people. b) Commercial Community Centers 1) Provide: Convenience goods, plus "soft line" items, such as clothing, and "hard line" items, such as hardware and small appliances. 2) Major Shops: Variety or junior department store. 3) Number of Shops: 20 to 40. 4) Approximate Market: 15,000 people. c) Regional Centers 1) Provide: Full range of merchandise and services. 2) Major Shops: Full size department store. 3) Number of Shops: 40+. 4) Approximate Market: 50,000 people.			X
483. Village Types Defined—Transit-Oriented Developments (TODs) vs. Traditional Neighborhood Developments (TNDs). Both TODs and TNDs are compact mixed-use villages, characterized by a village center within a higher-density urban core, roughly equivalent to a 5-minute walking radius (1/4 mile), surrounded by a secondary mixed use, mixed-density area with an outer boundary roughly equivalent to a 10-minute walking radius from the village center (1/2 mile).			X
484. Town and village center standards. See Table 4 in General Plan 2040			X
485. Use criteria for proposed village/town center masterplans. Criteria to include: a) Mix of residential and commercial zoning/uses b) Mix of housing types (single-family and multifamily) c) County roads d) Road/intersection density			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
e) Public or private water system f) Public or private wastewater system g) Public facilities investment (school, park, or community center).			
486. Ensure that any cul-de-sacs approved are consistent with Hawai‘i County Code Section 23-48.			X
487. Establish Urban Growth Areas as land that is envisioned as future areas of urban and suburban and should include only those lands that meet the following criteria: a) Are characterized by urban development that can be efficiently and cost effectively served by roads, water, sanitary sewer and storm drainage, schools and other urban governmental services within the next 20-40 years; b) Do not extend beyond natural boundaries, such as watersheds, which impede provision of urban services; c) Respect topographical features that form a natural edge, such as watercourses and ridge lines; d) Are sufficiently free of environmental constraints to be able to support urban growth without major environmental impacts; e) Do not unnecessarily overlap into State Land Use Agricultural. f) Shall not overlap with State Land Use Conservation District.			X
488. New subdivisions shall prioritize connectivity with other existing roadways. When topographical challenges, such as minor gulches or streams, lead to dead-end streets within a subdivision, seek to find alternative connectivity points and/or require stub-out connections be developed, as appropriate, for future connectivity.			X
489. Sidewalks shall be required for new developments within the Urban Service Areas.			X
490. Bike lanes and sidewalks are required for new or improved arterial and collector streets in Urban Growth Areas.			X
491. Utilize incentives and other strategies to ensure that residential development meets established minimum and maximum densities of zoning and infrastructure services available.			X
492. The County shall proactively initiate change of zones within the Urban Service Area to facilitate the County’s desired land use development.			X
493. Establish Urban Service Areas within Urban Growth Areas serviced by existing water and wastewater infrastructure services at a community level of distribution (public or private).			X
494. Large urban development will only be allowed within the Urban Growth Area when water and wastewater can be provided.			X
495. Future growth within the Urban Growth Area should be encouraged in a pattern of compact densities that support public transit.			X
496. Encourage special design districts within historic towns to promote and enhance the history and culture of the area.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
497. Support the development of a master plan for lands within the vicinity of the University of Hawai‘i at Hilo to incorporate a "college town" concept utilizing an appropriate mixture of residential, commercial and other land uses to complement the university's infrastructure.			X
498. Develop, or facilitate the development of underutilized private and public properties within existing towns to be used as gathering places, community gardens, open squares and markets, auxiliary parking lots (including park and ride areas), and parks (including pocket and art parks, and outdoor amphitheaters, etc.).			X
499. Discourage the use of “flag lots” (lots with little or no street frontage, accessed by a driveway easement or narrow strip of land, and typically located to the rear of another lot) when subdividing residential property.			X
500. Discourage the use of cul-de-sacs when subdividing residential property.			X
501. Large oversized blocks in new subdivisions should be avoided in favor of smaller blocks and enhanced pedestrian networks.			X
502. Village and town centers should serve as the hub of retail, service, dining, entertainment, and visitor accommodation activity			X
503. Facilitate multi-family zoning in designated regional or community village/town centers.			X
504. Low- to medium-density residential development and/or low-impact office uses should serve as transitional densities between lower-density neighborhoods and more intensive commercial and residential uses.			X
505.. New development adjacent to areas of lower intensity or incompatible uses [nonresidential] should provide effective physical buffers to avoid adverse effects. Buffers may include larger setbacks, landscaped or forested strips, transition zones, fencing, screening, height and/or density step downs, and other architectural and site planning measures that avoid potential conflicts.			X
506. In Urban-designated locations, encourage residential and mixed-use developments to be submitted under more flexible development processes (i.e. as a Planned Unit Development versus a standard Subdivision) in order to achieve increased residential densities.			X
507. Encourage the concentration and rehabilitation of commercial uses within and surrounding a central core area.			X
508. Expanded commercial services should be encouraged in Kea‘au to meet the needs of population growth in the Puna district.			X
509. Regional retail uses, including big box and regional shopping centers should not be located adjacent to areas designated for low to medium density residential use on the Zoning Map or Future Land Use map or areas currently developed for such use.			X
510. Develop a Community Commercial Center for Waikoloa Village with shops, stores, and small business opportunities			X
511. Facilitate land use entitlements and other tools for the development of existing and future village/town centers and special design districts.			X
512. The County may impose incremental and conditional zoning based on performance requirements to curb speculation and resale of undeveloped lots only.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
513. Facilitate commercial areas to develop on an axis perpendicular to the highway.			X
514. Consider typology of village town centers such as along a highway, commercial main street, crossroads, or junction, etc.			X
515. Facilitate Urban renewal, rehabilitation, and/or redevelopment programs for existing town and village centers in cooperation with communities, businesses and governmental agencies.			X
516. Develop and implement a schedule for periodically evaluating zoning and land uses in places of transition to proactively initiate change of zones to accommodate growth and facilitate the County's desired land use development.			X
517. A complementary integration and mixture of land uses should be provided within all town centers and developments to maintain the areas' livability, manage future growth, and provide walkable and transit accessible destinations.			X
518. Promote the redevelopment of aging and high vacancy shopping centers, or strip type developments into mixed-use developments with housing and public recreation facilities.			X
519. In redeveloping areas characterized by vacant, abandoned, and underutilized older buildings, generally encourage rehabilitation and adaptive use of existing buildings rather than demolition.			X
520. Facilitate the development of vacant infill lots within Urban Service Areas that have historically been difficult to develop due to infrastructure or access problems, inadequate lot dimensions, fragmented or absentee ownership, or other constraints.			X
Discussion: Sustainability objectives related to increasing residential density and mixed use development patterns are not applicable to the proposed project.			
Sustainability Objective: Increase Rural land use designations.			
521. In order to minimize potential conflicts between agricultural and urban uses, the areas designated as Rural shall serve as a well-defined buffer area to separate uses between Urban to Agricultural.			X
522. In order to preserve larger lot agricultural lands for productive agricultural use, lands shall be designated for rural land use development concentric to urban areas where an intermediate land use between residential and productive agricultural areas is consistent with the surrounding uses and rural character. The intermediate land use between residential and productive agricultural areas is intended to serve as: a) A low-density area that provides a transitional use buffer area between strictly residential and commercial productive agriculture areas, and; b) A mix of personal or family-scale productive commercial or subsistence agricultural use on all newly established parcels in the Rural area, and; c) Parcels having a median size of between 1 – 5 acres but in no case less than 1/2 acre in size. d) Areas beyond both the Urban Growth Boundary and Rural areas are to be preserved for agricultural uses, open space, scenic viewsheds, and natural beauty areas.			X

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
523. Future growth in the rural designation area shall be located concentrically around existing Future Land Use Map low density urban areas.			**X**
524. The County shall proactively initiate State Land Use (SLU) amendments to establish Rural designations in appropriate locations consistent with General Plan policies and map, and desired land development patterns.			**X**
525. Allow appropriate flexibility for the development of small bed and breakfast or hosted vacation rental type visitor accommodations in rural areas, especially those with heritage, agriculture, wellness, or similar themes.			**X**
Discussion: Sustainability objectives related to increasing Rural land use designations are not applicable to the proposed project.			
Sustainability Objective: Industrial uses are designated in appropriate locations			
526. Industrial development shall be located in areas adequately served by transportation, utilities, and other essential infrastructure.			**X**
527. Developers shall provide water and wastewater service and any other basic infrastructure necessary for industrial development.			**X**
528. Industrial centers include Kanoelehua, Kawaihae, and Keāhole airport.			**X**
529. Light Industrial may be permitted in Pahoa, Laupāhoehoe-Pāpa‘aloa, Hāwī, Waimea, Waikoloa, Kainaliu-Honalo, Kealakekua-Captain Cook, Nā‘ālehu			**X**
530. Improve the aesthetic quality of industrial sites and protect amenities of adjacent areas by requiring landscaping, open spaces, buffer zones, and design guidelines.	**X**		
531. Industrial parks shall only be developed within existing water and wastewater service areas or in conjunction with new water and wastewater service.			**X**
532. Industrial Site requirements: a) Industrial development shall maintain or improve the quality of the present environment. b) Industrial activities may be located close to raw materials or key resources. c) Topography of industrial land shall be reasonably level. d) Industrial development shall be conveniently located to its labor resource. e) Buffer zones shall be established between industrial and adjacent incompatible uses of land. f) The direction of wind patterns and the absence of trade winds shall be considered in the siting of industrial areas. g) Industrial zoned land shall be located in areas with existing water and wastewater service or, if locating an industrial facility outside an urban service area provides a more appropriate location for a specific industrial use, water and wastewater service shall be developed privately and concurrently to serve the industrial facility. h) Industrial parks shall only be developed within existing water and wastewater service areas or in conjunction with new water and wastewater service.			**X**

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
533. Industrial Standard Types: a) General industrial (MG) district applies to areas for land uses that are generally considered to be offensive and noxious. These noxious, heavy industrial uses should be separated from residential and other incompatible uses in the zoning process. b) Limited Industrial (ML) district applies to areas with land uses for business and industrial uses that are generally in support of, but not necessarily compatible with activities and uses in other commercial districts. c) Industrial – Commercial Mixed District (MCX) The MCX district allows a mix of some mix of light industrial uses (not considered noxious, or heavy industrial) with commercial uses			X
534. Industrial and commercial mixed-use districts may be provided in appropriate locations.			X
535. Provide flexibility within the Zoning Code to accommodate emerging new industries.			X
536. Support the creation of industrial parks in appropriate locations as an alternative to strip development.			X
537. Locate industrial areas convenient to transportation facilities and provide a variety of industrial zoned districts and lot sizes, depending on the needs of the industries and the communities.			X
538. Industrial development should be in harmony with surrounding uses and the environment.			X
539. Discourage retail uses in industrial zones to maintain viable industrial areas.			X
540. Support land use policies that protect opportunities to locate industrial and warehouse sites near major transportation corridors and the airport			X
541. Prevent or mitigate the effects of industrial sprawl around harbors and industrial areas.			X
542. Identify industrial sites as the need arises.			X
543. Encourage the rehabilitation of existing service-oriented industrial areas.			X
544. Industrial uses may be permitted outside Future Land Use-designated areas through the Change of Zone or Special Permit regulatory review processes.			X
Discussion: The proposed project involves repairs and enhancements to an existing transfer station, which is naturally screened and buffered from land uses by open space and vegetation.			
Sustainability Objective: Supply meets and does not exceed projected demand of visitor accommodations in all scales of accommodations.			
545. Resort Area Standards: The following established standards shall guide the development of resort areas. a) Major Resort Area: A major resort area is a self-contained resort destination area that provides basic and support facilities for the needs of the entire development. Such facilities shall include sewer, water, roads, employee housing and recreational facilities, etc. A major resort area is designated as a Resort on the Future Land Use Map.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
1) Visitor unit range: 1,500-3,000 units. 2) Resort acreage: 90 acres minimum. 3) Open space: 50 acres minimum. 4) Either participate in an off-site housing program or provide adequate acreage and develop employee residential uses on-site. 5) The required employee housing ratio and method of provision shall be determined by an analysis of housing needs of each district or relative area and with the adoption of the resort zoning; provided that the ratio shall not exceed one employee unit for every two visitor units built. b) Intermediate Resort Area: An intermediate resort area is a self-contained resort destination area that provides basic and support facilities for the needs of the entire development on a smaller scale than a major resort area. Such facilities shall include sewer, water, roads, employee housing and recreational facilities, etc. 1) Visitor unit range: 500-1,500 units. 2) Resort acreage: 45 acres minimum. 3) Open space: 25 acres minimum. 4) Either participate in an off-site housing program or a maximum of 320 acres for residential use when other zoned lands are not available in close proximity for support use. 5) The required employee housing ratio and method of provision shall be determined by an analysis of housing needs of each district or relative area and with the adoption of the resort zoning; provided that the ratio shall not exceed one employee unit for every two visitor units built. c) Minor Resort Area: A minor resort area is a self-contained resort destination area that provides basic and support facilities for the needs of the entire development on a smaller scale than a major resort area. Such facilities shall include sewer, water, roads, employee housing and recreational facilities, etc. 1) Visitor unit range: 50-500 units. 2) Open space area commensurate with the scale of development. 3) Either participate in an off-site housing program or provide adequate acreage and develop employee residential uses on-site. 4) The required employee housing ratio and method of provision shall be determined by an analysis of housing needs of each district or relative area and with the adoption of the resort zoning; provided that the ratio shall not exceed one employee unit for every two visitor units built.			
546. Permit time shares and un-hosted short term vacation rentals only within designated resort areas.			**X**

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
547. Prioritize the rehabilitation and utilization of designated resort areas that are presently serviced by basic facilities and utilities before allowing new resorts in undeveloped coastal areas.			X
548. Short-term vacation rentals with an owner or operator living on the same building site of the rental unit may be permitted outside resort areas and will be treated as bed-and – breakfast establishments, using the process outlined in Chapter 25-4-7. The following additional requirements should apply to both Bed and Breakfast and short-term vacation rental establishments: a) Limitations on special permits for bed and breakfast establishments: 1) Shall not be located on SLU Agricultural Lands with Land Study Bureau land classification as overall productivity rating class of A or B (HRS 205-4.5); 2) Maximum number of hosted short-term vacation rental permits granted by region: special permits granted cannot exceed 3% of the population within any census tract; based on annual American Community Survey/ U.S. Census Bureau estimated profiles. The County will establish a waiting list for applicants once the use permit cap has been met in a census tract; 3) Incorporate appropriate items from ordinance 18-114 (Short-term vacation rentals- un-hosted) related to enforcement;i) Maximum occupancy for hosted short-term vacation rentals: Number of tenants cannot exceed the occupancy limit of two adults per bedroom, as determined by building permit records.			X
549. Prioritize the development of small-scale visitor accommodations (10 guests and under), owner-occupied short-term vacation rentals, and bed-and-breakfast visitor accommodations, in particular those with heritage, agriculture, wellness, or similar themes in rural areas and near points of interest.			X
550. Require new resort development to develop or connect to water reuse facilities.			X
551. The designation of any new resort areas shall require analysis of the character of the area; the immediate and surrounding environment, natural resources and beauty, cultural practices and cultural resources; shoreline public access; and nearby affordable housing concurrent with the demand created by the development.			X
552. The development of visitor accommodations and any resort development should complement the character of the area, protect the environment and natural beauty, cultural practices, and cultural resources, provide shoreline public access, and provide affordable housing to meet demand created by the development.			X
553. Designate and allocate future resort areas in appropriate proportions and in keeping with the social, economic, and physical environments of the County.			X
554. The County may impose incremental and conditional resort zoning that would be based on performance requirements.			X
Discussion: Sustainability objectives related to visitor accommodations are not applicable to the proposed project.			

Table 4-5: County of Hawai‘i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Increase in agricultural land preserved. Increase processing facilities on agricultural land.			
555. Agricultural lands shall not be rezoned to parcels too small to support economically viable farming units.			X
556. Rezoning of areas currently zoned Agricultural that are outside of the Urban Growth Area and Rural designation shall not be allowed, unless the rezoning is to permit a Planned Unit Development or a clustered development that preserves the majority of the property in non-residential use dedicated to agriculture, open space, or other conservation purposes, and does not have the primary effect of allowing subdivision into lots smaller than allowed by existing zoning.			X
557. Development and construction in “Productive Agricultural” and “Pastoral” areas shall be limited to agriculture, related economic infrastructure and cottage industries, renewable energy, open area recreational uses, and community facilities unless otherwise permitted by law.			X
558. When considering applications to consolidate and resubdivide pre-existing lots of record, lots less than one acre in size in the State Land Use Agricultural district shall only be permitted if that land utilization is improved relative to the objectives and policies of the General Plan.			X
559. A maximum developable area shall be established for lots designated as Productive Agricultural Land. Maximum Developable Area (MDA): Means the total floor area in square feet allowed under the approved land use. The floor area computation shall include: all floor areas under roof, including first, second, and third story areas, decks, pools, saunas; garage or carport, and other above ground structures. a) For lots up to 14,000 square feet, the maximum developable area is 25 per cent of total lot area. b) For lots over 14,000 square feet to one (1) acre, the maximum developable area is 3,500 square feet. c) For lots larger than one (1) acre, the maximum developable area is 5,000 square feet.			X
560. Through permit conditions, development agreements, deed restrictions, and/or other means, ensure that areas in the “Productive Agricultural Lands” and “Pastoral” Future Land Use Policy Map categories continue to be utilized for agricultural uses and not for speculative or other residential development.			X
561. Farm labor housing projects shall be developed in a clustered manner that minimizes the use of Productive Agricultural lands and is consistent with the character of surrounding land uses			X
562. Agricultural land uses consistent with HRS 205-2(d) shall be considered permitted uses and do not require an agricultural-based commercial-operations certification.			X
563. Certified, incubator, or community kitchens in the Rural or Agricultural District that are under 1,000 square feet and do not provide for on-site tours and/or on-premises sales shall be considered a permitted use (agricultural processing) to be treated the same as agricultural processing minor. Any certified kitchen in the Rural or Agricultural District exceeding 1,000 square feet needs to apply for plan approval.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
564. In order to minimize the potential conflicts between agricultural and non-agricultural uses, standards and guidelines for buffer areas located adjacent to agricultural lands shall be developed. Natural open spaces, gulches, and/or rural designations may serve as agricultural buffer areas in appropriate areas.			X
565. Designate agricultural lands as areas to be preserved for agriculture and open space and protected from urban encroachment.			X
566. Advocate to State to allow building sites smaller than one acre on lands in the State Land Use Agriculture District under certain criteria so as to increase the flexibility of the PUDs and the Clustered Rural Subdivision provision to enable clustering for preservation of open space, productive agricultural lands, conservation areas, coastal areas, and other important natural features.			X
567. Protect agricultural lands, especially fallow agricultural lands, through community land trusts or with tax incentives for farmers.			X
568. Discourage speculative residential development on agricultural lands			X
569. Any subdivision of Productive Agricultural land involving 30 acres or more currently zoned at densities between Ag-1a to Ag-5a and FA are encouraged to cluster development.			X
570. Consider access to infrastructure and crop suitability when recommending lands to be designated State Important Agricultural Lands. Explore designating small portions (community -scale) as Important Agricultural Lands before embarking on an island-wide initiative.			X
Discussion: Sustainability objectives related to agricultural land are not applicable to the proposed project. The project involves repairs and enhancements to an existing transfer station.			
Sustainability Objective: Increase in open space preserved.			
571. Public Lands with unique resources shall be maintained for public use.			X
572. Development and construction in the State land Use Conservation areas shall be minimized and, when necessary, limited to recreation, research, and education facilities unless otherwise permitted by law			X
573. The following shall be considered for the protection and conservation of natural resources. a) Areas necessary for the protection and propagation of specified endangered native wildlife, and conservation for natural ecosystems of endemic plants, fish and wildlife. b) Lands necessary for the preservation of forests, park lands, wilderness and beach areas. c) Lands with a general slope of 20 per cent or more that provide open space amenities or possess unusual scenic qualities. d) Lands necessary for the protection of watersheds, water sources and water supplies. e) Lands with topographic, locational, soils, climate or other environmental factors that may not be normally adaptable or required for urban, rural, agricultural or public use. f) The Coastal Zone and Special Management Area as defined by statute and in accordance with the adopted objectives and guidelines.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
574. Zoning, subdivision and other applicable ordinances shall provide for and protect open space areas.			X
575. General Plan Natural designations shall include: a) Steep slopes b) Natural Areas and Reserves c) Open Space Recreation Areas d) Scenic Vistas and Viewplanes e) Areas set aside for cultural and/or natural resource preservation purposes			X
576. Agricultural land may be used as one form of open space or as green belt.			X
577. Support the expansion of public preserves.			X
Discussion: Sustainability objectives related to open space are not applicable to the proposed project.			
Sustainability Objective: Minimize development within Special Management Area.			
578. Development in the SMA, including subdivision, shall only be approved if it is first found that it will not have any substantial adverse environmental or ecological effect.			X
579. Prohibit the complete clearing of vegetation of a parcel within the SMA.			X
580. Prohibit the installation of future injection wells in Special Management Areas if wastewater is not treated to an R-1 level of water quality.			X
581. Require all black wastewater disposal systems in the SMA to be contained, pumpable units, or be connected to a collective treatment facility.			X
582. New urban designations shall be located away from coastal areas and the Special Management Area.			X
583. In new subdivisions in the Special Management Area, subdivisions should be encouraged to develop as Cluster Plan Developments (C.P.D.) pursuant Hawai'i County Code Section 25-6-20, or Clustered Rural Subdivisions.			X
584. The County should explore alternatives (e.g., density transfer based on gross density) for the applicant of a Special Management Area (SMA) Major Permit to dedicate to the government or land trust or encumber as open space for the purpose of realizing a shoreline linear park along as much of the coastline as possible.			X
585. Designate coastal areas to be preserved, protected, and connected to the rich network of natural and cultural resources.			X
586. Encourage those developments that are not coastal dependent to locate in inland areas.			X
Discussion: Sustainability objectives related to the Special Management Area are not applicable to the proposed project. The project area is outside of the Special Management Area.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Reduce land disturbance activities such as clearing and grading of forested areas.			
587. No lands above the 2,500-foot elevation in the districts of North Kona and South Kona shall be re-classified to any zone district having a minimum lot size of less than 20 acres except where contiguous lands held under the same or a cooperative ownership are concurrently placed in a lower density zoned district with a net effect of maintaining or reducing overall density levels and enhancing the integrity and value of the region's watershed and forest systems.			X
588. Designate mauka forests to be preserved, protected, and connected to the region's rich network of natural and cultural resources.			X
589. Discourage complete clearing of vegetation of a parcel with predominantly native trees and forest.			X
Discussion: Sustainability objectives related to clearing and grading of forested areas are not applicable to the proposed project. The project involves repairs and enhancements to an existing transfer station. Much of the project area has been previously disturbed.			
Sustainability Objective: Designating Special Places			
590. Designate Special Design Districts with detailed planning, design standards and review procedures for the following areas and all identified village and town centers including Banyan Drive: a) Banyan Drive Redevelopment Area b) Downtown Hilo c) Kailua-Kona Village d) Volcano Village historic core; e) Pāhoa Town; f) Kea'au Town; g) Kurtistown-to-Mountain View corridor h) Hāwī i) Kapa'au			X
591. Waipi'o Valley shall be retained for agricultural and limited recreational uses.			X
592. Encourage the integration of best management practices and an understanding of cultural values and experiences during the land use application process for any business plans requiring Planning Department plan approval within Waipi'o Valley and other identified important places.			X
593. Establish a Wahi Pana designation that addresses the following: a) Designate Waipi'o and Pololū Valley, including their rims, as Wahi Pana and create a Special Area Plan that will protect the natural resources, preserve their storied past and perpetuate agricultural traditions and unique rural lifestyle; b) Designate the summits of Mauna Kea, Mauna Loa, Hualālai, and Kīlauea summit areas as Wahi Pana. c) Establish buffers on undeveloped lands around Kealakekua Bay to assure preservation of the region's unique environment and cultural resources.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Discussion: Sustainability objectives related to designation of special places are not applicable to the proposed project.			
Sustainability Objective: Preservation Tools			
594. Prioritize the implementation of tools for reshaping the pattern of future development to prevent further sprawl such as transfer of development rights, overlays, clustering requirements, and land pooling.			**X**
595. Collaborate with community-based land pooling associations concerning legal and financial aspects of land pooling as they relate to County or State legal requirements and tax policies.			**X**
596. Encourage innovative uses of land with respect to geologic, topographic conditions, and to reduce infrastructure costs using clustering developments and planned unit developments.			**X**
Discussion: Sustainability objectives related to preservation tools are not applicable to the proposed project.			
Sustainability Objective: Special Permits			
597. Special Permits for Overnight Accommodation may be allowed for the following types: a) Bed and Breakfasts/Hosted Short Term Vacation Rentals b) Inns/Boutique Hotels c) Retreat (Lodge)			**X**
598. Retreat Standards: A retreat is generally located in an area that provides the user with rest, quiet, and isolation for a natural and environmental experience. Such facilities shall have sewer, water, roads, and provide open space recreation to users. Retreats are permitted uses in Resort zoning (V), or may be permitted through the special use permit process in the Rural or Agricultural district. The following standards shall apply: a) Maximum visitor units: 50 units without individual kitchens. b) Provide open space area commensurate with the scale of development. c) Shall not be located on SLU Agricultural Lands with Land Study Bureau land classification as overall productivity rating class of A or B (HRS 205-4.5) d) Shall not be accessed through substandard roads or roads-in-limbo unless an adequate traffic impact analysis report (TIAR) demonstrates accesses are safe and proposed use would not significantly impact existing neighborhood.			**X**
599. On Pastoral designated lands, a special permit for an ecotourism-related or other nonagricultural use may be considered provided the proposed project is consistent with the General Plan.			**X**
Discussion: Sustainability objectives related to special permits are not applicable to the proposed project.			

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
Sustainability Objective: Future Land-Use Maps			
600. Interpretation of the Future Land Use Map shall be reviewed against the following criteria: subdivision boundaries, census block groups, place types, County zoning designations, state land use designations and CDP guidance.			X
Discussion: Sustainability objectives related to future land-use maps are not applicable to the proposed project.			
Section 6: Implementation Priorities & Actions			
Sustainability Objective: Regularly analyze all viable financing tools. Regularly seek opportunities for revenue diversification. Infrastructure investment priorities implement land use policies of the General Plan.			
601. The County shall seek opportunities to leverage multiple sources of funding during its Capital Improvement budget preparation.			X
602. The County shall advance alternative financing and funding mechanisms such as community development financial institutions, public-private partnerships, revolving funds, tax increment financing, and other innovative methods for projects exceeding (1 million)	X		
603. The County shall develop a debt financing plan to schedule bond issuance.			X
604. The County shall conduct a comprehensive review of the real property tax structure to assure compatibility with General Plan goals and policies.			X
605. The County shall develop and adopt an impact fees ordinance that considers district specific needs and excludes urban core areas where infill is encouraged.			X
606. The County shall seek to increase economic efficiency by regular review of the fee and fine schedules.			X
607. The County shall establish infrastructure priorities based on the following criteria: a) Within the Urban Growth Area; b) The area contains a mix of residential and commercial zoning; c) The area lacks a core infrastructure component (municipal or community water, wastewater, or roadways) deemed necessary to accommodate infill or redevelopment; d) Redevelopment options (including the renovation of historic structures) and/or projected commercial and residential growth (including affordable, multi-family housing) is hindered by the lack of core infrastructure; e) Highest priority should be given to areas that contain existing built-out parcels facing regulatory constraints relating to parcel size, areas with historic buildings and structures in need of renovation, and areas where affordable housing is lacking and development is impeded by the lack of necessary infrastructure.			X
608. The County shall develop and implement rural infrastructure standards.			X
609. Ensure change of zone and concurrency compliance review during subsequent subdivision and plan approval applications.			X
610. The County shall invest in asset management systems to develop a complete inventory and periodic measurement of the physical condition and existence of all capital assets.			X

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
611. The County should calculate the full cost of the different services they provide.			**X**
612. The County should provide and improve existing infrastructure where high density uses are permitted and encouraged.			**X**
613. The County shall explore financing options and provide technical assistance for infrastructure in underserved areas.			**X**
614. The development of County facilities should be designed to fit into the locale with minimal intrusion while providing the desired services. Implement protocols for receiving community input during Capital Improvement Project siting and design.	**X**		
Discussion: Funds from the Clean Water State Revolving Fund program are proposed to be used for the subject project. Design and material use considerations would be made to improve the life span of proposed structures to minimize long-term maintenance costs. The project would repair and enhance an existing transfer station to meet the needs of the residents from surrounding communities now and into the future.			
Sustainability Objective: Capital Improvement Program			
615. Pursuant to the County Charter, all public improvements, which primarily consist of Capital Improvements, shall conform to and implement the General Plan. As all Capital Improvements are sanctioned and primarily funded by way of the County's Capital Improvement Program and budget pursuant to specification in the County Charter, the Capital Improvement Program and budget shall be prepared as follows: a) The Capital Improvement Program and budget shall clearly set forth the qualification and priority of each budgeted item with regard to its identity and priority in the General Plan, and/or Development Plans or special purpose plans which may more specifically implement the General Plan. b) The program shall integrate projects of semi-autonomous agencies and the several sources of funding for improvements, including fuel tax, revenue sharing, subsidies and grants from other government entities, and funding from semi-autonomous agencies. The program shall also include projects committed to the County in private development master plans. c) To prioritize the lists of proposed Capital Improvements contemplated by County agencies as required by the Charter, the director shall consider: 1) Funding source. The capacity of a funding source available to a proposed improvement may be a factor in determining priority. Potential funding sources include general obligation bond, general revenues, special fund, land-secured financing, State revolving fund, block grants, federal sources, or other reliable source. The capital budget shall not exceed prudent debt service limits for general obligation and other sources that affect the borrowing capacity of the County. 2) Action Committee recommendations. The Action Committees may provide their priorities for the fiscal year to the director which the director may add to the agency lists, if not already included, upon the director's determination of consistency with the Community Development Plan. 3) Project delivery phases. All phases of a project – including planning, land acquisition, design, construction, equipment	**X**		

Table 4-5: County of Hawai'i Draft General Plan 2040	S	NS	N/A
and furnishing—shall be addressed in the multi-year Capital Improvements Program. Priority shall be considered to complete projects that are ready to be constructed. 4) Deferred maintenance. Deferred maintenance of existing facilities, as determined by the responsible agency, should be considered a high priority for those facilities intended by the responsible agency to remain in active, long-term service. 5) Level of service. The General Plan's Level of Service standards should be considered to equalize the delivery of services among the planning areas. 6) Land use policies. Higher priority may be given to improvements that influence growth patterns consistent with the General Plan or Community Development Plans. 7) The director shall provide opportunity for community review of the proposed program prior to referral to the mayor, for the mayor's review and referral to the Council.			
Discussion: The proposed project is consistent with the objectives and policies of the Draft General Plan.			

4.2.2 The Kaʻū Community Development Plan

The modern district of Kaʻū encompasses approximately 922 square miles, with of 80 miles of virtually undeveloped coastline. Nearly two-thirds of its total land area is in the State Conservation District, a fraction of a percent is settled, and the remainder is largely in agricultural. The Kaʻū Community Development Plan (Kaʻū CDP) includes the areas of Pāhala, Punaluʻu, Nāʻālehu, Discovery Harbour, and Ocean View. The Kaʻū CDP is a forum for community input into County policy at the regional level and the delivery of County services to the community. Table 4-6 below, discusses the applicable objectives and policies with the proposed project:

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Land Use Policy			
Objective: The following Land Use Policies speak more generally to the preservation of the preferred settlement pattern in Kaʻū, including the relative location of residential, commercial, industrial, and resort areas:			
Policies			
1. Rehabilitate and develop within existing zoned urban areas already served by basic infrastructure, or close to such areas, instead of scattered development.			**X**
2. Concentrate commercial uses within and surrounding central core areas in Pāhala, Nāʻālehu, and Ocean View and do not allow strip or spot commercial development outside of the designated urban areas.			**X**
3. Commercial facilities shall be developed in areas adequately served by necessary services, such as water, utilities, sewers, and transportation systems. Should such services not be available, the development of more intensive uses should be in concert with a localized program of public and private capital improvements to meet the expected increased needs.			**X**

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
4. Industrial development shall be located in areas adequately served by transportation, utilities, and other essential infrastructure.			X
5. Rehabilitate and optimize the utilization of designated resort areas that are presently serviced by basic facilities and utilities and before new resorts are allowed in undeveloped coastal areas.			X
6. The development of visitor accommodations and any resort development should complement the character of the area; protect the environment and natural beauty;respect existing lifestyles, cultural practices, and cultural resources; provide shoreline public access; and provide affordable housing to meet demand created by the development.			X
7. With the adoption of the Kaʻū CDP, Figures 2, 3, 4, 5, 6, and 7 on pages 43 through 48 are adopted as the official Land Use Policy Map for the Kaʻū CDP planning area. The land use category definitions are identical to those used in the General Plan LUPAG map (and included in the Glossary). Future land use decisions in the Kaʻū CDP planning area shall be consistent with the Land Use Policy Map boundaries, designations, and policies herein, unless the CDP and the General Plan are in direct conflict.			X
8. In the “Low Density Urban (LDU)” Land Use Policy Map category in the Kaʻū CDP planning area, changes of zone shall only be permitted to Single-Family Residential (RS), MultipleFamily Residential (RM-7.5 or higher), Residential-Commercial Mixed Use (RCX-7.5 or higher), or Open (O).			X
9. If infill capacity is exceeded in areas designated “Low Density Urban (LDU)” on the Land Use Policy Map in Pāhala, it would be appropriate to designate TMK (3)9-6-005:001 as LDU to take advantage of existing water and road connections.			X
10. The Director of Planning shall offer a favorable recommendation to the Planning Commissions, subject to appropriate conditions, only for those proposed zoning code amendments that would further the intent and ensure consistency with the objectives and policies of the Kaʻū CDP.			X
11. Variances from the zoning or subdivision codes (including PUDs) shall be carefully considered relative to Kaʻū CDP objectives and policies, and, when approved, shall be conditioned to ensure consistency with the CDP.			X
12. Outstanding natural or cultural features, such as scenic spots, water courses, fine groves of trees, heiaus, and historical sites and structures, shall be preserved during subdivision.			X
13. When considering waivers to the requirements of the zoning and subdivision chapters of the County Code for consolidation and resubdivision actions in the Kaʻū CDP planning area, the Planning Director shall carefully consider how to best further the public welfare relative to the objectives and policies of the Kaʻū CDP. Specifically, the Director 1) should confer with all appropriate agencies, 2) shall, if the new subdivision will include lots smaller than otherwise permitted in the subject zone, endeavor to locate those smaller lots in LDU, MDU, or Industrial areas and near existing towns/villages and thoroughfares, and 3) should require necessary improvements.			X
14. Plan approval and related conditions shall consider forest and coastal ecosystems, agricultural lands, open space, viewscapes, areas of natural beauty, archeological and historic sites, and historic buildings when assuring that proper siting is provided for, proper landscaping is provided, unsightly areas are properly screened or eliminated, and natural and man-made features of community value are preserved.			X

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
15. Amend the General Plan Land Use Pattern Allocation Guide and, as needed, State Land Use boundaries, to conform with the official Kaʻū CDP Land Use Policy Map.			X
16. Amend General Plan Table 14-5 to reflect the LUPAG map amendments in Policy 15.			X
17. Pursue brownfields assessment grants to complete the Phase I and II environmental assessment for high priority sites in Kaʻū.			X
18. Develop and implement a County-wide, cross-agency affordable housing plan.			X
19. Provide technical assistance to communities and organizations implementing community based strategies to create safe, sustainable, and connected communities.			X
Discussion: The foregoing land use policies are not applicable to the proposed project. The project involves repairs and enhancements to an existing transfer station.			
Expand the Local System of Preserves			
Objective: This section of the CDP guides the expansion of lands held in public trust, supports landowners establishing conservation and agricultural easements and using agricultural and forestry land preservation programs, and encourages the National Park to pursue acquisition priorities.			
Policies:			
20. Support the National Park Service's expansion plans for the Hawaiʻi Volcanoes National Park.			X
21. Support the efforts of landowners to establish conservation and agricultural easements.			X
22. Secure in public trust (fee simple or by easement) priority coastal land that achieves one or more of the Community Objectives.			X
23. Protect the shoreline from the encroachment of man-made improvements and structures.			X
24. Maintain the shoreline for recreational, cultural, education, and/or scientific uses in a manner that is protective of resources and is of the maximum benefit to the general public.			X
25. Protect and conserve forest and coastal areas with native wildlife, natural ecosystems, and wilderness.			X
26. Encourage those developments that are not coastal dependent to locate in inland areas.			X
27. To reinforce existing protections, the official Kaʻū CDP Land Use Policy Map designates coastal areas in Kaʻū as open space to be preserved, protected, and connected to the rich network of natural and cultural resources in the region. Development and construction in the coastal "Conservation" and "Open" areas shall be minimized and, when necessary, limited to recreation, research, and education facilities unless otherwise permitted by law.			X
28. On lots that are at least partially within the Special Management Area (SMA) in the Kaʻū CDP Planning Area, establish shoreline setbacks at the earliest stages of the land use planning and development process at a minimum of 1,320 feet (1/4-mile); however, the applicant may request that the setback be reduced by providing information to the Department, including information required for SMA review, which would allow for an assessment of the proposed activity's impacts			X

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
and in consideration of the physical limitations of the property. For lots created prior to the date of adoption of the CDP with an average lot depth of two hundred feet or less, the shoreline setback line shall be 40 feet.			
29. No development, including subdivision, shall be approved in the SMA unless the development will not have any substantial adverse environmental or ecological effect.			X
30. Amend Planning Department Rule 11 to specify that the Planning Department establish shoreline setbacks in the Kaʻū CDP Planning Area in accordance with Policy 28.			X
31. Review SMA boundaries in Kaʻū and initiate appropriate amendments.			X
Discussion: The proposed project involves repairs and enhancements to an existing transfer station, which is located inland, away from the coast and away from forestry land.			
Protect Agricultural Lands & Open Space			
Objective: This section of the CDP protects agricultural land and open space from non-agricultural development with the CDP Land Use Policy Map, urban growth boundaries, limits on Special Permits and lots sizes, and restrictions on residential development. It also prioritizes agricultural subdivision standards, revisions in water catchment variance rules, stronger farm dwelling regulations and tax incentive programs, development of transfer of development rights (TDR) and land bank programs, State Important Agricultural Land designations, and expedited lot consolidation in existing rural subdivisions.			
Policies			
32. Conserve and protect agricultural lands			X
33. Preserve the agricultural character of Kaʻū, including the open space preserved by agricultural land.			X
34. Vacant lands in urban areas should be made available for residential uses before additional agricultural lands are converted into residential uses.			X
35. Limit development of agricultural land to agricultural uses, discouraging speculative residential development and urban encroachment.			X
36. Agricultural lands shall not be rezoned to parcels too small to support economically viable farming units.			X
37. Maintain the open space and rural character of the Ocean View, Mark Twain, and Green Sands areas, including continued inclusion in the State Land Use Agricultural district (not Rural), except in the areas in Land Use Policy Map urban categories.			X
38. To reinforce existing protections, the official Kaʻū CDP Land Use Policy Map designates agricultural lands in Kaʻū as areas to be preserved for agriculture and open space. Development and construction in “Important Agricultural Land” and “Extensive Agriculture” areas shall be limited to agriculture, related economic infrastructure and cottage industries, renewable energy, open area recreational uses, and community facilities unless otherwise permitted by law			X

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
39. The urban growth boundary between agricultural areas (designated "Important Agricultural Land" or "Extensive Agriculture") and developed areas (designated "Rural," "Low/Medium/High Density Urban," "Industrial," or "Resort") is parcel-specific in the Kaʻū CDP planning area, except at Punaluʻu and the Low/Medium Density Urban and Industrial nodes in Ocean View. Areas outside designated developed areas shall be preserved as agricultural lands, open space, scenic view planes, and natural beauty areas, unless the CDP and the General Plan are in direct conflict.			**X**
40. Special permits of any kind in the "Important Agricultural Land" and "Extensive Agriculture" Land Use Policy Map categories should not be permitted in the Kaʻū CDP planning area, except for the following uses (as defined in HCC chapter 25): • Agriculture and Related Economic Infrastructure: Animal hospitals, Veterinary establishments, Fertilizer yards utilizing only manure and soil, for commercial use • Cottage Industry related to Agriculture: Bed and breakfast establishments, Guest ranches, Lodges, Home occupations • Community Facilities: Community buildings, Public uses and structures, Shooting ranges, ATV courses (in areas without cultural, natural resource, or scenic value) • Quarries whose permit conditions address geotechnical, engineering, safety, private road use, oversight, and any site-specific issues. • Urban Uses in Ocean View: Uses consistent with the LDU, MDU, and Industrial LUPAG categories indicated on the Kaʻū CDP Land Use Policy Map in Ocean View, until the SLU boundaries are amended (from Agriculture to Urban). The Planning Commission shall also include in any Special Permit approval (or recommend for approval to the State Land Use Commission) appropriate performance conditions to achieve CDP objectives and implement CDP policies.			**X**
41. Special permits of any kind in the "Rural" Land Use Policy Map category should not be permitted in the Kaʻū CDP planning area, except for the following uses (as defined in HCC Chapter 25): • Agriculture and Related Economic Infrastructure: Animal hospitals, Veterinary establishments, Kennels • Cottage Industry: Bed and breakfast establishments, Home occupations, Commercial or personal service uses, on a small scale • Health and Dependent Care: Day care centers, Family child care homes, Adult day care homes, Group living facilities • Community Facilities: Community buildings, Meeting facilities, Schools, Churches, temples and synagogues, Public uses and structures, including those privately managed (e.g., road maintenance facilities), Tennis courts, Swimming pools • Urban Uses in Ocean View: Uses consistent with the LDU, MDU, and Industrial LUPAG categories indicated on the Kaʻū CDP Land Use Policy Map in Ocean View, until the SLU boundaries are amended (from Agricultural to Urban). • Quarries in Hawaiian Ocean View Estates whose permit conditions address areas of concern with current mining operations, including geotechnical, engineering, safety, private road use, regular oversight by			**X**

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
agencies with the necessary expertise and capacity, site restoration plans, and any other site-specific issues. The Planning Commission shall also include in any Special Permit approval (or recommend for approval to the State Land Use Commission) appropriate performance conditions to achieve CDP objectives and implement CDP policies.			
42. Landowners interested in subdivision of agricultural land in the Kaʻū CDP planning area shall be encouraged to subdivide pursuant to HCC section 23-112 related to farm subdivisions.			**X**
43. When considering applications to consolidate and resubdivide pre-existing lots of record, the Director of Planning shall only permit lots less than one acre in size in the State Land Use Agricultural district if the applicant clearly demonstrates that an unreasonable economic hardship cannot otherwise be prevented or land utilization is improved relative to the objectives and policies of the CDP.			**X**
44. Through permit conditions, development agreements, deed restrictions, and/or other means, ensure that areas in the "Important Agricultural Land" and "Extensive Agriculture" Land Use Policy Map categories continue to be utilized for agricultural uses and not for speculative or other residential development.			**X**
45. Establish agricultural subdivision standards that 1) lower barriers to the creation of viable farmsteads by reducing infrastructure requirements and expenses; 2) ensure public safety with appropriate rural water systems and roads; and 3) mitigate against speculative development.			**X**
46. Amend Planning Department Rule 22 to increase the number of allowable lots with a water catchment variance, in consideration of zoning, the size of the existing lot, and other sitespecific characteristics.			**X**
47. Amend the Hawaiʻi County Code and associated Planning Department Rules to establish reporting and inspection requirements, as well as enforcement and fine protocols, for additional farm dwellings to ensure that dwellings are used for farm-related purposes.			**X**
48. Update the County of Hawaiʻi's tax reduction programs to ensure that public tax incentives for agricultural land use result in actual public benefits and promote local agricultural production where possible.			**X**
49. Conduct a feasibility study for a County-wide Transfer of Development Rights (TDR) and/or Save Land for the Future (SLF) program. If feasible, adopt any necessary enabling County legislation.			**X**
50. Recommend lands to be designated State Important Agricultural Lands.			**X**
51. Preserve open space in Green Sands, Mark Twain, and Ocean View subdivisions by streamlining the lot consolidation process with, for example, fee waivers and exemptions from signage requirements.			**X**
Discussion: The foregoing policies related to agricultural and open space land are not applicable to the proposed project. The project involves repairs and enhancements to an existing transfer station.			

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Protect Mauka Forests			
Objective: This section of the CDP protects mauka forests from development with the CDP Land Use Policy Map.			
Policies			
52. To reinforce existing protections, the official Kaʻū CDP Land Use Policy Map designates mauka forests in Kaʻū as open space to be preserved, protected, and connected to the region's rich network of natural and cultural resources. Development and construction in mauka "Conservation" areas shall be minimized and, when necessary, limited to recreation, research, and education facilities unless otherwise permitted by law.			X
Discussion: The foregoing policies related to forest land are not applicable to the proposed project. The project area is not within any forestry areas.			
Preserve Scenic Areas			
Objective: This section of the CDP protects open space, areas with natural beauty, and scenic view planes with permitting controls and by prioritizing view plane regulations and scenic routes.			
Policies			
53. Protect, preserve and enhance the quality of open space, areas endowed with natural and scenic beauty, and public views to and along the shoreline.			X
54. Protect scenic vistas and view planes from becoming obstructed, considering structural setbacks from major thoroughfares and highways to protect view plans.	X		
55. Do not allow incompatible construction in areas of natural beauty.	X		
56. In the Kaʻū CDP Planning Area, the environmental report for proposed changes of zone on property that may impact open space, view planes, and areas of natural beauty shall include view plane and, as appropriate, line-of-sight analysis and, to facilitate implementation of Policy 10, proposed conditions to mitigate scenic impacts.			X
57. In the Kaʻū CDP Planning Area, applications for Special Permits that may impact open space, view planes, and areas of natural beauty shall include view plane and, as appropriate, line of-sight analysis and proposed performance conditions to mitigate scenic impacts.			X
58. In the Kaʻū CDP Planning Area, applications for Use Permits for wind energy facilities and telecommunications antennas and towers shall include view plane and, as appropriate, line of-sight analysis to demonstrate how the request does not cause substantial, adverse impact to the community's character, including open space, public views, and areas of natural and scenic beauty, and proposed conditions to mitigate scenic impacts.			X
59. Develop and establish view plane regulations to preserve and to protect from obstruction scenic resources, vistas, view planes, open space, prominent landscapes, and areas of natural beauty identified in the General Plan.			X
60. Introduce a resolution to initiate the establishment of a scenic corridor.			X
61. Maintain a continuing program to identify, acquire and develop viewing sites on the island.			X

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Discussion: The proposed project would not affect coastal views in the vicinity of the project area. The proposed project involves repairs and enhancements to an existing transfer station, which is screened from the existing highway by vegetation. Waiʻōhinu Transfer Station is located inland and away from the coast. As such, the project would not adversely affect existing public views to and along the shoreline. Waiʻōhinu Transfer Station is presently visible only from areas that are a significant distance away on the upper slopes mauka of the transfer station.			
Protect and Enhance Ecosystems			
Objective: This section of the CDP encourages the removal of unexploded ordnance, the collaborative development and implementation of resource management plans, the use of Hawaiian plants, and the enforcement necessary to protect ecosystems.			
Policies			
62. Protect, preserve, and effectively manage forests, watersheds, shoreline areas, natural areas, and rare or endangered species and their habitats.			**X**
63. The Director of Public Works should condition grading and grubbing permits to require screen planting, landscaping, erosion control planting, or other treatments to maintain the good appearance of graded areas and reduce the detrimental impact on adjacent properties.			**X**
64. Collaborate with the Department of Health, the Three Mountain Alliance, the USDA Natural Resource Conservation Service, and the Soil and Water Conservation District to reduce runoff, maximize soil and water conservation, and protect and effectively manage watersheds and natural areas.			**X**
65. Actively implement the Honuʻapo Park Resources Management Plan.			**X**
66. Complete and implement the Kāwā Stewardship plan.			**X**
67. Develop and implement resource management plans for coastal properties secured by the County in the future.			**X**
68. Encourage the use of Hawaiian plants (indigenous and Polynesian-introduced plants) by state, county, and private landowners in order to support a Hawaiian sense of place, to ensure that our cultural heritage is reflected in landscaping, and to help reverse the displacement and decline of Hawaiian plants.			**X**
Discussion: The foregoing policies related to protection and enhancement of ecosystems are not applicable to the proposed project.			
Protect and Enhance Cultural Assets			
Objective: This section of the CDP prioritizes the preservation of cultural resources, historic buildings, and roads and the development of historic streetscapes and rural road standards. It also guides community-led efforts to restore historic sites and buildings, retain village and town character, and document oral, written, and video histories.			
Policies			
69. Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaiʻi.			**X**
70. Protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupuaʻa tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.			**X**

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
71. Review and comment by DLNR's State Historic Preservation Division (SHPD) shall be requested for any permit or entitlement for use which may affect any building, structure, object, district, area, or site that is over fifty years old, except as provided in HRS section 6E-42.2.	**X**		
72. In the "Low Density Urban" (LDU) and "Medium Density Urban" Land Use Policy Map categories, in those cases where provisions of the zoning and subdivision codes are inconsistent with the character of surrounding neighborhoods, variances or PUDs that maintain consistent village/town character should be encouraged.			**X**
73. The development of commercial facilities should be designed to fit into the locale with minimal intrusion while providing the desired services. Appropriate infrastructure and design concerns shall be incorporated into the review of such developments.			**X**
74. As appropriate to maintain community character while also accommodating drainage, walkability, maintenance, and other site-specific needs when improving existing roads in Pāhala, Nāʻālehu, and Waiʻōhinu, retain the current road design, including pavement width and lack of curbs, gutters, sidewalks, or paved shoulders and swales.			**X**
75. As appropriate to maintain community character while also accommodating drainage, walkability, maintenance, and other site-specific needs, new roads (both public and private) in the Kaʻū CDP planning area may be constructed without curbs, gutters, sidewalks, or paved shoulders and swales.			**X**
76. Restore and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaiʻi.			**X**
77. Adopt and implement street design standards that accommodate, where appropriate, flexibility in the design of streets to preserve the rural character of an area, including pavement width, unpaved shoulders/swales, rock walls, lighting, and landscaping featuring native plants.			**X**
78. Install an historic streetscape on Kamani Street in Pāhala.			**X**
Discussion: The foregoing policies related to protecting and enhancing cultural assets are not applicable to the proposed project. DEM will consult with SHPD through the grading permit process regarding historic preservation review requirements that may be applicable to the proposed project.			
Establish and Manage Public Access			
Objective: This section of the CDP ensures appropriate public access to the shoreline and mauka forests, guides community-led access management, and prioritizes a County public access program.			
Policies:			
79. Ensure appropriate public access to the shoreline, public trails, hunting areas, scenic places and vistas, and significant historic sites, buildings, and objects of public interest. Additionally, ensure access for cultural practitioners.			**X**
80. Appropriate public access to and along the shoreline shall be ensured as a condition of SMA exemptions and permits.			**X**
81. Subdividers of six or more lots, parcels, units, or interests shall be required to dedicate land for public access for pedestrian travel from a public highway or street to the land below the high-water mark on any coastal shoreline or to areas in the mountains where there are existing facilities for hiking, hunting, fruit-picking, ti-leaf sliding, and other recreational purposes, and where there are existing mountain trails.			**X**

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
82. In co-sponsorship with the State when possible, acquire land for public access to historic sites and objects and to the shoreline where safe transit does not already exist.			**X**
83. Establish and maintain an active public access program.			**X**
Discussion: The foregoing policies related to establishing and managing public access are not applicable to the proposed project.			
Establish and Manage a Regional Trail System			
Objective: This section of the CDP prioritizes and guides the development of a regional network of trails.			
Policies:			
84. Where a subdivision is traversed by a natural water course, drainage way, channel, or stream, the Planning Director should require a pedestrian, equestrian, and/or bicycle path when the opportunity exists to connect to existing or future drainage or trail corridors.			**X**
85. Develop a network of pedestrian access trails to places of scenic, historic, natural or recreational values. This system of trails shall provide, at a minimum, an island-wide route connecting major parks and destinations.			**X**
86. Actively implement the Ala Kahakai National Historic Trail Memorandum of Understanding in Kaʻū.			**X**
87. Appropriate, finance, allot, and encumber capital improvement projects in support of trail development as part of a regional trail system.			**X**
88. Establish the Punaluʻu-Nīnole Springs region as a recreation area.			**X**
Discussion: The foregoing policies related to establishing and managing a regional trail system are not applicable to the proposed project.			
Coordinate Infrastructure, Facility, and Service Improvements			
Objective: This section of the CDP guides the coordination of regional infrastructure improvements.			
Policies			
89. Implement capital improvement priorities in Kaʻū.			**X**
90. Implement protocols for receiving community input at meetings in Kaʻū during capital project siting and design. Consult with and solicit input from community members with generational knowledge to minimize the impact of proposed changes to the use of land on cultural practices, cultural sites, and culturally significant areas, including burials.			**X**
91. Provide technical support to communities and organizations pursuing capital improvement financing through USDA Rural Development, infrastructure improvement financing districts, and other sources.			**X**
92. Support use of the Air National Guard Innovative Readiness Training (ANG IRT) program in the development of infrastructure programs and projects.			**X**
Discussion: The foregoing policies related to the coordination of infrastructure, facility, and service improvements are not applicable to the proposed project. The proposed project involves much needed repairs and enhancements to an existing transfer station to meet the needs of residents in surrounding communities now and into the future.			

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Improve Water Infrastructure			
Objective: This section of the CDP prioritizes the improvement of existing potable water systems to support infill growth.			
93. Water system improvements shall correlate with the County's desired land use development pattern.			X
Discussion: The foregoing policy related to existing potable water systems is not applicable to the proposed project.			
Enhance the Roadway Network			
Objective: This section of the CDP maintains road connectivity, prioritizes flood prevention and road improvements, and guides road improvements in Mark Twain and Green Sands subdivisions.			
94. All subdivision in the Kaʻū CDP planning area, including condominium property regimes (CPRs) and planned unit developments (PUDs), should conform to connectivity standards in HCC 23-28, 29, and 40 of the Hawaiʻi County Code.			X
95. Install culverts and construct drainage channels and other related improvements as necessary to prevent flooding of roadways and other areas.			X
96. Improve safety along Kamāʻoa Road, Kaʻaluʻalu Road through Green Sands, and South Point Road from Highway 11 to Kamāʻoa Road.			X
97. Improve safety on Wood Valley Road, possibly including posted speed limits, lane markers, and stop signs.			X
98. Make intersection improvements at Pikake, Koali, and Wood Valley Roads.			X
99. Prioritize the maintenance of County roads, including street lights, street signs, and mowing.			X
100. Continue to maintain "roads-in-limbo" in coordination with the Department of Hawaiian Homelands and shoreline public access plans.			X
101. Remove the Nāʻālehu bypass from the General Plan transportation map			X
Discussion: The foregoing policies related to enhancing the roadway network are not applicable to the proposed project.			
Formalize Alternative Routes			
Objective: This section of the CDP prioritizes formalizing and improving emergency alternative routes.			
102. Formalize emergency alternative routes through Kapāpala Ranch between the highway and Wood Valley Road.			X
103. Secure improvement easements along Kaʻalāiki Road. Kaʻalāiki Road will continue to be used as a minor, rural street for local traffic and as an alternate route to Highway 11 as needed, so it will require safety improvements.			X
104. Replace Wood Valley Road bridges.			X
105. Establish an emergency alternative route connecting Green Sands and Mark Twain subdivisions.			X
Discussion: The foregoing policies related to formalizing alternative routes are not applicable to the proposed project.			

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Expand Mass Transit Facilities and Services			
Objective: This section of the CDP prioritizes bus system improvements, including a Kaʻū loop route, an Ocean View route, evening trips to Hilo and Kona, and bus shelters.			
106. Establish an intra-district bus loop route that circulates among and within all Kaʻū communities.			**X**
107. Provide bus routes for evening trips to Hilo and Kona.			**X**
108. Provide bus shelters in Nāʻālehu, Waiʻōhinu, Discovery Harbour, and Ocean View.			**X**
109. Establish a bus route that circulates within Ocean View.			**X**
Discussion: The foregoing policies related to expanding mass transit facilities and services are not applicable to the proposed project.			
Strengthen Emergency and Health Facilities			
Objective: This section of the CDP prioritizes new fire stations, upgraded emergency equipment, police station improvements, a new police substation in Ocean View, civil defense warning systems, and the hardening of other critical emergency infrastructure.			
110. The number and location of emergency services facilities and personnel in Kaʻū shall be based on the population to be served and response time.			**X**
111. Address the backlog of facilities improvements in Kaʻū, including: • Build a new fire station in Nāʻālehu, Pāhala, and Ocean View, in that order of priority. • Upgrade trucks, ambulances, and other equipment for fire crews. • Make improvements in the Nāʻālehu Police Station, including repairs, hardening, hazardous materials abatement, energy efficiency, and ADA. • Build a new Ocean View Police Substation.			**X**
112. Harden critical infrastructure to ensure its effective use after an earthquake, eruption, and/or hurricane, including the Ocean View Fire Station, the Pāhala Fire Station, the Kaʻū Police Station Generator Building, and the Kaʻū Police Station (Nāʻālehu Police Station).			**X**
113. Build the Kahuku Park Community/Senior Center, Gym, and Shelter.			**X**
114. Ensure adequate placement and maintenance of civil defense warning systems.			
115. Establish a helipad to support the provision of emergency services in Kaʻū.			**X**
Discussion: The foregoing policies related to emergency and health facilities are not applicable to the proposed project.			
Expand Emergency Services			
Objective: This section of the CDP prioritizes four police officers on each shift, hazard mitigation plans, and the expansion of Neighborhood Watch and CERT programs.			
116. Ensure adequate police protection by maintaining at least four police officers on duty each shift in the Kaʻū District.			**X**

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
117. Actively expand the Neighborhood Watch and CERT programs.			X
118. In collaboration with residents, develop and adopt a hazard mitigation plan for each community in Kaʻū, including an evacuation clearance rate and evacuation plans and routes.			X
119. Implement the Kaʻū Community Wildfire Protection Plan.			X
Discussion: The foregoing policies related to expanding emergency services are not applicable to the proposed project.			
Improve Environmental Management Facilities			
Objective: This section of the CDP prioritizes expanded wastewater systems, the new transfer station in Ocean View, improvements to the recycling area in Pāhala, and green waste drop-off and mulch pick-up sites.			
120. Extend the primary wastewater collection lines in Pāhala and Nāʻālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems.			X
121. Build the solid waste transfer station in Ocean View.			X
122. Implement plans to improve the recycling area at the Pāhala Transfer Station.			X
123. In consultation with residents, farmers, and vector control experts, add green waste drop-off and mulch pick-up sites in Kaʻū, with strict control of invasive species, pests, and disease.	X		
Discussion: The foregoing policy supports the establishment of green waste drop-off sites in Kaʻū. The proposed enhancements to the Waiʻōhinu Transfer Station would include the establishment of a future green waste drop-off site and is therefore aligned with the direction of the Kaʻū Community Development Plan.			
Strengthen and Expand Education Facilities and Services			
Objective: This section of the CDP prioritizes and guides the development of a school and library in Ocean View as well as improvements in educational and library facilities throughout the district.			
124. Support the development of charter and other public schools in Hawaiian Ocean View Estates subdivision, including on County-owned parcels.			X
Discussion: The foregoing policy related to strengthening and expanding education facilities and services are not applicable to the proposed project.			
Expand Park and Recreation Facilities			
Objective: This section of the CDP prioritizes the Kahuku Park Community/Senior Center, Gym, and Shelter, a swimming facility in Nāʻālehu, skate and ATV parks, and the continual improvement of park facilities.			
125. Continually improve park facilities and services in Kaʻū, including fields, courts, playgrounds, lighting, restrooms, signage, and youth programs.			X
126. Acquire land surrounding Wittington Beach Park to allow for its expansion and the construction of a parking area.			X
127. Develop parks in Ocean View, commensurate with population growth.			X
128. Build a swimming facility in Nāʻālehu and Ocean View.			X

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
129. Collaborate with a "friends of the park" group to develop and manage an ATV track/course in an area of no ecological or cultural value.			X
130. Collaborate with a "friends of the park" group to develop and manage skate parks in Nāʻālehu and Ocean View.			X
Discussion: The foregoing policies related to expanding park and recreation facilities are not applicable to the proposed project.			
Coordinate Regional Economic Development			
Objective: This section of the CDP guides the implementation of regional economic development strategies, including an education, enterprise development, and research network and regional strategies to increase "buying local."			
131. Collaborate with private sector to identify business needs, strengthen existing industries, and diversify the economy by attracting new endeavors.			X
132. Advance economic development that enhances and is balanced with the County's natural, cultural, and social environments.			X
133. Promote a distinctive identity for Kaʻū.			X
134. Align the clusters and priority projects in the Comprehensive Economic Development Strategy (CEDS) with the objectives, policies, and actions in the Kaʻū Community Development Plan.			X
135. Commission a study of Economic and Financial Impact Reviews and propose recommendations for their integration into the regulatory review and approval process.			X
Discussion: The foregoing policies related to coordinating regional economic development are not applicable to the proposed project.			
Strengthen Local Agriculture			
Objective: This section of the CDP guides efforts to strengthen the local agriculture value chain, including agricultural land acquisition, agricultural parks and water systems, the diversification of agriculture-based businesses on agricultural land, and agricultural tourism.			
136. Collaborate with public and private sectors to preserve and expand the agriculture, forestry, and fishing industries.			X
137. Support the development of private and State agricultural parks to make agricultural land available for agricultural activities.			X
138. Cooperate with appropriate State and Federal agencies and the private sector to develop, improve and expand agricultural waste systems.			X
139. Encourage the establishment of open farmers markets to allow local agricultural producers to market their products.			X
140. Encourage, where appropriate, the establishment of visitor-related uses and facilities that directly promote the agriculture industry.			X
141. Assist in the promotion of products produced in Kaʻū.			X

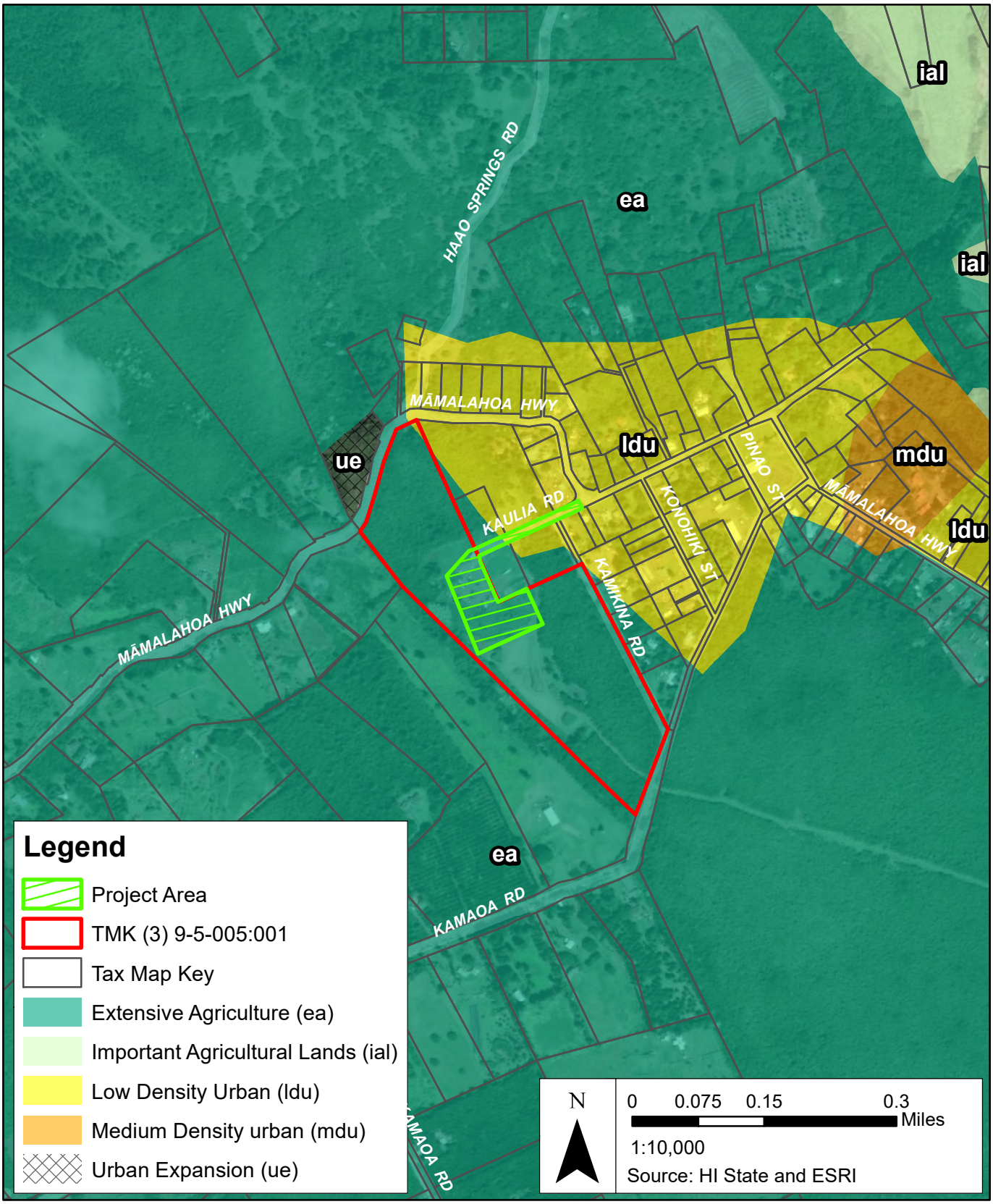
Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Discussion: The foregoing policies related to strengthening local agriculture are not applicable to the proposed project. Although the project area is within land designated for agricultural uses, these particular lands are not capable of producing sustained, high agricultural yields without intensive application of modern farming methods and technologies. Additionally, the project area is an existing transfer station. The proposed project is consistent with the current use of the land.			
Develop Community Renewable Energy			
Objective: This section of the CDP guides the development of local, renewable, distributed energy networks while prioritizing greater public review of commercial renewable energy projects.			
142. Encourage the development of alternate energy resources, providing they complement existing agricultural uses and preserve ecologically and culturally significant areas.			**X**
143. Amend the Zoning Code to require Use Permits for commercial renewable energy projects, mills, and major processing facilities in the County Agricultural Zone.			**X**
Discussion: The foregoing policies related to developing community renewable energy are not applicable to the proposed project.			
Pilot Payment for Ecosystem Services			
Objective: This section of the CDP guides exploratory efforts to secure community payments for ecosystem services.			
144. The land and water shall be considered essential resources for present and future generation and should be protected and enhanced through the use of economic incentives and soundly managed for potential economic benefit.			**X**
Discussion: The foregoing policies related to pilot payment for ecosystem services are not applicable to the proposed project.			
Grow Health and Wellness Services			
Objective: This section of the CDP guides the expansion of the regional network of health and wellness services.			
145. Encourage the health/wellness and retirement industries.			**X**
Discussion: The foregoing policies related to growing health and wellness services are not applicable to the proposed project.			
Promote the Creative, Education, and Research Sectors			
Objective: This section of the CDP guides the development of a regional education, enterprise development, and research network.			
146. Promote and develop the island of Hawaiʻi into a unique scientific and cultural model.			**X**
Discussion: The foregoing policies related to promoting the creative, education, and research sectors are not applicable to the proposed project.			

Table 4-6: The Kaʻū Community Development Plan	S	NS	N/A
Develop the Local Visitor Sector			
Objective: This section of the CDP guides the development of a regional hoʻokipa network – a place-based approach to community tourism.			
147. Encourage the development of a visitor industry that is in harmony with the character of the area and environmental and social goals of residents.			**X**
148. Encourage the visitor industry to provide facilities that offer an educational experience as well as recreational activities.			**X**
149. Encourage the development of small family or "bed and breakfast" type visitor accommodations.			**X**
150. Amend the Zoning Code to require Plan Approval for commercial open area recreational uses in the County Agricultural District.			**X**
Discussion: The foregoing policies related to developing the local visitor sector are not applicable to the proposed project.			

4.2.3 General Plan Land Use Pattern Allocation Guide and Zoning

The General Plan Land Use Pattern Allocation Guide Map (LUPAG) delineates broad-brush boundaries that are graphic expressions of the General Plan policies, particularly those relating to land uses. The land use pattern in a broad, flexible design intended to guide the direction and quality of future developments in a coordinated and rational manner. These maps delineate a number of land use categories for each area.

The General Plan Future Land Use Map designation for the project area is Extensive Agriculture (ea) and Low Density Urban (ldu). See Figure 4-2. Extensive agriculture areas are lands not classified as Important Agricultural Land. It includes lands that are not capable of producing sustained, high agricultural yields without intensive application of modern farming methods and technologies due to certain physical constraints such as soil composition, slope, machine tillability and climate. Other less intensive agricultural uses such as grazing and pasture may be included in the Extensive Agriculture category. Low density urban areas include residential uses with ancillary community and public uses, and neighborhood and convenience-type commercial uses. The project area consists of areas designated as Agricultural (A-20a) and Roads by the County. See Figure 4-3. The existing and planned use is a permitted use for areas within the County Agricultural district.



WILSON OKAMOTO CORPORATION

FIGURE 4-2

LAND USE PATTERN ALLOCATION GUIDE MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

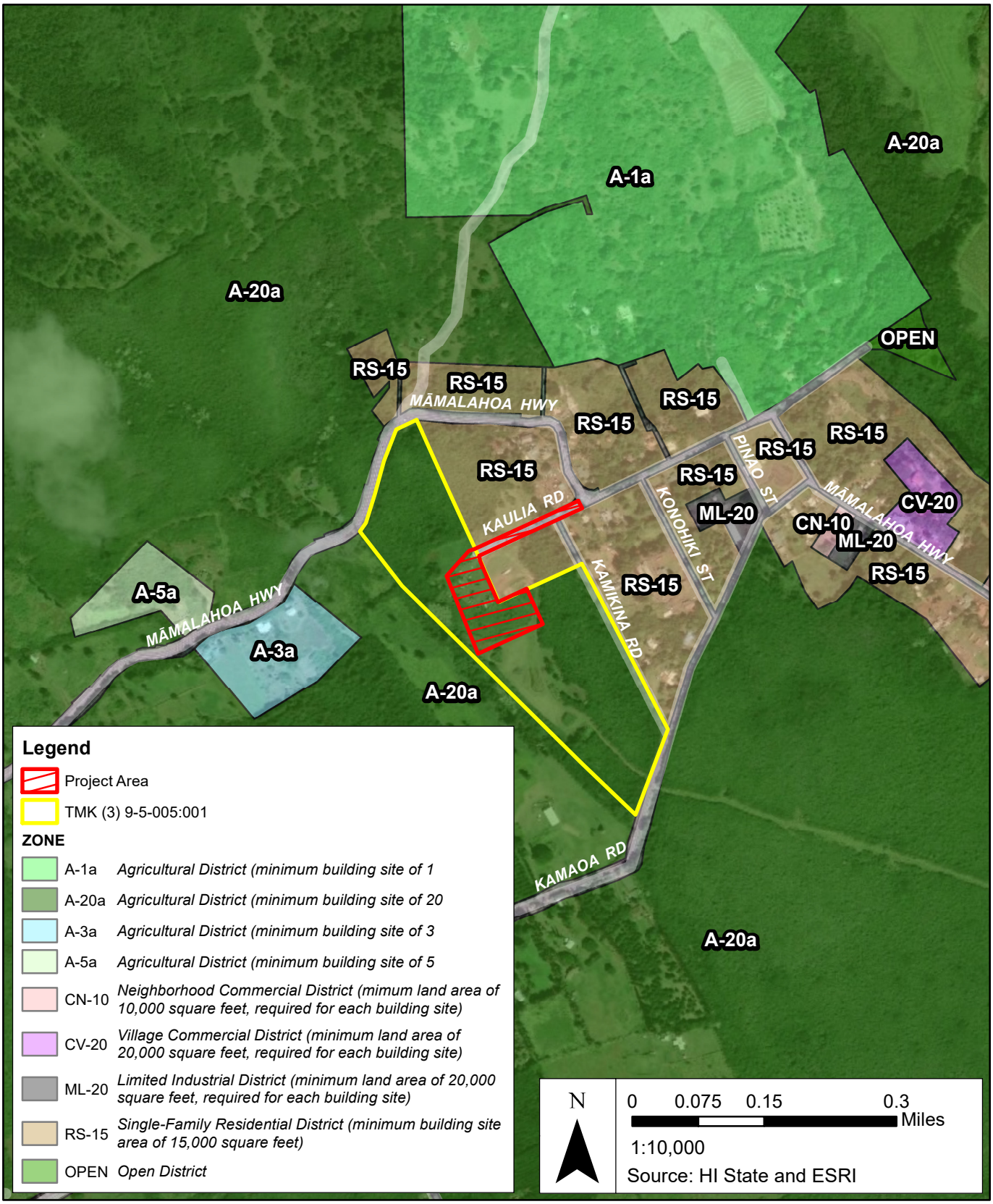


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FIGURE 4-3

COUNTY ZONING MAP

WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENT
NĀʻĀLEHU, HAWAIʻI ISLAND, HAWAIʻI

4.2.4 County of Hawaiʻi Integrated Resources and Solid Waste Management Plan Update

In compliance with Chapter 342G, HRS, counties in Hawaiʻi are required to update and revise their solid waste management plans every five years. The last update to the County of Hawaiʻi plan was completed during 2009. The Integrated Resources and Solid Waste Management Plan (IRSWMP) update provides an evaluation of waste management practices in the County, including waste reduction practices and programs, opportunities for implementation of zero waste policies and practices, the status of both active and closed landfills, and potential options for expanding and extending the capacity of the HSMY.

The IRSWMP update outlines a series of recommendations for action during the County's next 5-year implementation period generally consisting of the following:

- Implementing a series of programs to reduce the volume of waste entering the landfills;
- Making improvements to existing infrastructure to accommodate new waste reduction programs; and
- Conducting more in-depth evaluations of 1) re-configuring the Reload Facility (also known as the East Hawaiʻi Regional Sort Station) at the HSMY and trucking waste to WHSL, or 2) developing a new lined landfill adjacent to the current HSMY, to address the need for long-term capacity for residuals needing disposal.

The proposed project involves improvements to existing infrastructure to better accommodate waste reduction programs. The County is currently in the early stages of updating the 2009 IRSWMP, expected to be published in the late third quarter of 2019.

4.3 Permits and Approvals

The following is a list of permits, approvals, and reviews that may be required prior to construction and operation of the proposed project.

<u>State of Hawaiʻi</u>

Department of Health
- Plan approval, part of SWMP
- SWMP approval
- NPDES
- IWS
- Noise Permit, as required
- Air Pollution Control Permit, as required

<u>County of Hawaiʻi</u>

Department of Public Works
- Final drainage system design approval
- Grading Permit
- Building, Electrical, Plumbing

Planning Department

- Plan review

Department of Water Supply

- Water demand calculations

Fire Department

- Plan review

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5. ALTERNATIVES ANALYSIS

5.1 No Action Alternative

Under the no action alternative, the proposed repairs to the existing facility would not be pursued and new enhancements would not be constructed. Associated environmental impacts would be avoided, construction costs spared, and the need for permits and approvals precluded.

The existing transfer station is currently inadequate to meet the needs of the community both now and into the future. Without the proposed repairs and enhancements, the facility would continue to operate under existing conditions with restrictions on disposal activities in the interest of public safety. While DEM could continue to seek renewal and modification of the existing SWMP, the acceptance of various waste streams would only be permitted to the extent that it could be accommodated within the physical improvements of the existing facility. Additional restrictions may be placed on the facility as it continues to fall into disrepair. Consequently, residents would need to haul some if not most of their trash to the next closest transfer station, which is in either Ocean View located approximately 12.5 miles to the west or Pāhala located approximately 10 miles to the northeast. Longer drives would place a disproportionate burden on the community population, which consists of a higher percentage of the County’s overall minority population with a median household income significantly lower than the median household income of the County. It is anticipated that this additional burden may result in an increase in illegal dumping activities, which would also have visual and odor impacts associated with it. The longer drives may also discourage residents from recycling altogether potentially leading to an increase of solid waste being diverted to the landfill.

This alternative was not selected because it would not meet the purpose and need for the project as well as the goals and objectives of DEM’s solid waste management program. The proposed project would enhance the existing transfer station improving the essential waste management services provided to the community and the quality of life for residents in the area.

5.2 Alternative 1: Complete Closure of Wai‘ōhinu Transfer Station

Under this alternative, the Wai‘ōhinu Transfer Station would be completely closed to ensure safety of the public. Project costs, permits, and approvals associated with this alternative would be those associated with closure of the facility, such as removal of residual waste, existing structures, and equipment. In the long-term, DEM would be able to reallocate costs associated with operating and maintaining the Wai‘ōhinu Transfer Station to the operation and maintenance of its other solid waste management facilities.

Upon closure, all forms of solid waste and recyclable materials would no longer be accepted at the facility. Similar to a no action alternative, residents would need to haul their trash to the next closest transfer station in either Ocean View or Pāhala. Longer drives would place a disproportionate burden on the community population, which consists of a higher percentage of the County’s overall minority population with a median household income significantly lower than the median household income of the County. It is anticipated that this additional burden may result in an increase in illegal dumping activities, which would also have visual

and odor impacts associated with it. The longer drives may also discourage residents from recycling altogether potentially leading to an increase of solid waste being diverted to the landfill.

This alternative involves complete closure of the Wai‘ōhinu Transfer Station in the interest of public safety. Although closure would address safety risk and liability issues, it would eliminate a convenient location for several nearby communities to dispose of their trash and introduce an additional burden on those who may already be economically challenged. Secondary impacts such as illegal dumping and adverse visual and odor impacts are also anticipated. This alternative was not selected for the foregoing reasons.

5.3 Alternative 2: Complete Closure and Relocation of Wai‘ōhinu Transfer Station

This alternative, similar to Alternative 1, would involve complete closure of the Wai‘ōhinu Transfer Station. Because closure of the existing transfer station would eliminate a convenient location for several nearby communities to dispose of their trash and introduce an additional burden on those who may already be economically challenged, this alternative proposes to construct a completely new transfer station in a different location. While providing a new facility would meet the purpose and need for the project as well as the goals and objectives of DEM’s solid waste management program, it would also have greater construction costs and environmental impacts.

One of the key challenges to constructing a new facility would be siting, especially if a proposed Senate Bill requiring a half-mile buffer around solid waste facilities gets passed. Other criteria that would need to be considered in site selection includes proximity to nearby communities being served, permitting constraints, and land use constraints. These issues all present significant challenges in the site selection process and would require additional time and resources to address.

This alternative was not selected because it would result in greater construction costs and environmental impacts. The site selection process to construct a new transfer station would likely be challenging and would require additional agency resources. This alternative was not selected for the foregoing reasons.

6. FEDERAL CROSS-CUTTER AUTHORITIES

The proposed project may utilize federal funds through the Clean Water State Revolving Fund (CWSRF) program administered by the State of Hawaiʻi, which would constitute a federal action, and will require the project to comply with federal cross cutting authorities and Hawaiʻi CWSRF program requirements.

6.1 Archaeological & Historic Preservation Act, National Historic Preservation Act

The Archaeological & Historic Preservation Act, 16 U.S.C. §469a-1, deals with the threat of loss or destruction of significant data by federal construction projects; notification requests for preservation of data; and survey of sites, preservation of data and compensation. The National Historic Preservation Act (NHPA) of 1966 requires the consideration of the effect of any project on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. In addition, Section 106 of the NHPA requires consideration of the effects of a project with federal involvement on historic properties. Section 106 is applicable to the project if a federal agency is carrying out the project, approving it, or funding it.

A Literature Review and Field Inspection (LRFI) for Improvements to the Waiʻōhinu Transfer Station was prepared in March 2020 (see Appendix D). According to the LRFI, a few archaeological studies have been conducted in the vicinity of the project. Archaeological studies focused on a drainage improvement project approximately 1,811 feet (552 meters or 0.34 miles) feet to the northeast of the project, which documented a traditional Hawaiian shrine (SIHP #50-10-76-2600) and multiple historic sites and structures (SIHP #50-10-76-2601 to -2606) associated with early missionary and plantation activities. Another archaeological study was conducted approximately 1,657 feet (505 meters 0.31 miles) feet to the south of the project, which reported that a previous stone feature had existed however it was destroyed by rock removal and only foundation stones remained.

No cultural features or significant cultural artifacts were observed or documented at the project site. Based on the results of background research and the field survey this study finds the project effect determination is “no historic properties affected”. However, no sub-surface archaeological investigations have been conducted on the property to assess the potential for cultural deposits to exist. Therefore, an archaeological monitoring program is recommend to be conducted in accordance with HAR 13-279 (Rules Governing Standards for Archaeological Monitoring Studies and Reports) to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the project.

As described in the Archaeological and Historical Resources section, it is anticipated that the proposed project will not adversely affect any historic properties due to the extent of ground disturbance at the transfer station and seeing as no cultural, historic or archaeological sites appear to be present in the project area. Because the study area has been used for solid waste disposal activities even before the 1970’s, it is also logical to conclude that the proposed construction will not impact any culturally valued resources or traditional cultural practices.

By letter dated October 27, 2017, the State Department of Health determined under the South Hilo Sanitary Landfill Closure project that "Treatment Works" projects under the CWSRF program are not required to comply with the Section 106 NHPA review and consultation process. DEM will coordinate with DOH on the classification of this project and regarding compliance with Section 106 consultation requirements.

6.2 Bald and Golden Eagle Protection Act

Under the Bald and Golden Eagle Protection Act, 16 U.S.C §§ 668-668(c), the two species of eagle are federally protected by the U.S Fish and Wildlife Service. This law provides for the protection of the bald eagle and the golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3). Bald or golden eagles have never been recorded in any fauna catalogue for the state of Hawaiʻi. Therefore, requirements associated with the Bald and Golden Eagle Protection Act are not applicable to the proposed project.

6.3 Clean Air Act

Under the Clean Air Act, 42 U.S.C. §7506(c), the U.S. Environmental Protection Agency (EPA) regulates emissions of air pollution from mobile and stationary sources. The EPA has set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: particulate matter (PM_{10} and $PM_{2.5}$), ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead. In addition to these pollutants, Hawaiʻi has also established a state ambient air quality standard for hydrogen sulfide.

Pursuant to the Clean Air Act, states are required to adopt enforceable plans to achieve and maintain air quality that meets established air quality standards. The State of Hawaiʻi Department of Health (DOH), Clean Air Branch, administers the state's air quality program and 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 (HRS, Chapter 342B).

As discussed in the Air Quality section, the quality of air in the general Waiʻōhinu area is considered "Good." Overall, air quality on the island of Hawaiʻi is affected by emissions from industrial sources, vehicles, and natural sources. The major industrial source for the island is oil-fired power plants, which emit SO_2, nitrogen oxides, and particulate matter. Motor vehicles emit CO, nitrogen oxides and hydrocarbons (an ozone precursor), as well as smaller amounts of other pollutants including particulates. Also emitting SO_2 is the geothermal power plant Puna Geothermal Venture, which supplies about 10-20% of the island's electricity. However, Puna Geothermal Venture is currently non-operational due to the volcanic eruptions of 2018. Additionally, volcanic emissions of sulfur dioxide convert into particulate sulfate, which causes a volcanic haze (vog) to blanket the area during occasional episodes of southerly kona winds.

No significant impacts on air quality are anticipated as a result of the construction or operation of the proposed project. A dust management control plan will be developed which

identifies and mitigates all activities that may generate airborne, visible fugitive dust. Measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction will be incorporated into the project plans and specifications. Construction activities must comply with the provisions of Hawaiʻi Administrative Rules, §11-60.1-33 on Fugitive Dust. Respective contractors will be responsible for adhering to air quality standards and minimizing air quality impacts during the various phases of construction. An air pollution control permit may be required to operate certain construction equipment, such as crushers or generator sets, which may be used during construction. If required, the contractor will be responsible for obtaining an air pollution control permit from the Clean Air Branch and complying with all applicable conditions and requirements. Exhaust emissions from construction vehicles are also anticipated to have negligible impacts on air quality in the project area as the emissions would be temporary in nature, relatively small, and readily dissipated.

In the long-term, GHG emissions in the project area are expected to slightly increase with the introduction of mulching activities associated with green waste disposal. It is anticipated that these emissions will be partially offset by a reduction in the number of vehicle miles traveled by residents who currently self-haul green waste to the Volcano Recycling & Transfer Station located approximately 42 miles away or to the Keʻei Recycling & Transfer Station located approximately 44 miles away. Emissions will also be minimized by limiting mulching activities, which are proposed to occur on an intermittent basis. As such, any potential cumulative impacts on air quality are anticipated to be negligible and will be mitigated by complying with the State DOH Administrative Rules, Title 11, Chapter 60 “Air Pollution Control” as applicable.

6.4 Coastal Barrier Resources Act

The Coastal Barrier Resources Act, 16 U.S.C. §3501, designates coastal barriers along the Atlantic and Gulf coasts and along the shore areas of the Great Lakes for conservation, and is not applicable to the State of Hawaiʻi.

6.5 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), 16 U.S.C. 1456(c)(1), provides for the management of the nation’s coastal resources. Hawaiʻi’s coastal zone area is the entire state. The goal is to “preserve, protect, develop and where possible, to restore or enhance the resources of the nation’s coastal zone.” HRS, Chapter 205A sets forth Hawaiʻi’s CZM Program which is in compliance with the CZMA and approved by federal and State agencies. The County authorities administer Special Management Area (SMA) permits and shoreline setback provisions as part of the CZM Program. The objectives and policies of the CZM Program are defined in HRS, Chapter 205A-2.

As discussed in the CZM Program section in Chapter 4, the proposed project is consistent with CZM objectives and policies. In addition, the Waiʻōhinu Transfer Station site is located outside of the areas regulated by the SMA permitting and shoreline setback provisions.

6.6 Endangered Species Act, Fish & Wildlife Coordination Act, Magnuson-Stevens Fishery Conservation and Management Act

The Endangered Species Act, 16 U.S.C. §1536(a)(2) and (4), is administered by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's (NOAA), National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while NOAA is mainly responsible for marine wildlife. NOAA-NMFS is also the agency consulted pursuant to the Essential Fish Habitat consultation process of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §1801. The Fish and Wildlife Coordination Act (FWCA), 16 U.S.C. §662(a), provides the basic authority for USFWS involvement in evaluating impacts of proposed water resource development projects on fish and wildlife, and requires federal agencies to take actions to prevent or mitigate loss or damage to wildlife resources.

According to the U.S Fish & Wildlife Service, federally listed species with the potential to occur in the project vicinity include: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot (*Fulica alai*).

A Natural Resources Assessment for Improvements to the Waiʻōhinu Transfer Station was prepared on March 3, 2020 (see Appendix C). The assessment included a survey of extant birds and mammals in the project area. No species currently listed or proposed for listing as threatened or endangered under federal or state endangered species statutes was observed or is known to be associated with the project area. Nonetheless, impact minimization measures will be incorporated into the project plans and specifications to avoid or minimize impacts on listed species that have the potential to occur within the project area. It is anticipated the project may affect, but is not likely to adversely affect federally-listed threatened or endangered species. DEM will continue to consult with USFWS pursuant to Section 7 of the Endangered Species Act. No adverse impacts on EFH are anticipated as there are no streams, wetlands, or other aquatic resources within or immediately downstream of the project area. Additionally, all construction related and development related runoff will be retained on-site.

6.7 Environmental Justice Executive Order

Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority and Low Income Populations" signed February 11, 1994 by President William Clinton requires Federal agencies to identify and avoid, minimize, or mitigate "disproportionately high and adverse" effects of federal projects on the health and environment of minority and low income populations.

Whites make up the minority population in the Waiʻōhinu CDP at 14.7 percent, which is less than the County at 33.7 percent and significantly lower than the national total of 72 percent. However, Waiʻōhinu has a significantly greater share of Asians, Native Hawaiians and Other Pacific Islanders, and individuals of two or more races compared to that of the entire County of Hawaiʻi. The 2010 median household income for Waiʻōhinu was $38,250, which is significantly lower than the County median household income of $54,996 and the national median household income of $49,445.

It is not anticipated that the proposed project will disproportionately affect the health and environment of minority and low income populations. The proposed project is for repairs and enhancement to an existing transfer station that is currently in disrepair. Without the proposed improvements, the transfer station will continue to deteriorate impacting essential solid waste management services. Implementing the proposed project would not only improve the condition of the existing transfer station, but would also improve quality of life for nearby residents promoting promote health and safety within the community. Potential environmental impacts associated with the project are anticipated to be minimal.

6.8 Farmland Protection Policy Act

The Agriculture and Food Act (Public Law 97-98) was passed in 1981 and contained the Farmland Protection Policy Act (FPPA), Subtitle I of Title XV, Section 1539-1549. The purpose of the FPPA is to minimize the effect of federal programs on the unnecessary and irreversible conversion of prime farmland, unique farmland, and other land of statewide or local importance to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. It is administered by the US Department of Agriculture (USDA), National Resources Conservation Service. The three categories of farmland described in FPPA are translated to the Hawai‘i Department of Agriculture’s (DOA), ALISH classifications of “Prime,” “Unique,” and “Other” agricultural lands.

The Wai‘ōhinu Transfer Station site is entirely within lands considered unclassified, which are remnant lands that are not able to be defined as prime, unique, or other. The project will involve repairs and enhancements to an existing transfer station, which is not suitable for agricultural activities.

6.9 Floodplain Management Executive Order

Executive Order 11988 is to avoid to the extent possible the adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. To accomplish 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.”

As discussed in the Flood and Tsunami Hazard section in Chapter 3, the Wai‘ōhinu Transfer Station is located in Zone X, an area determined to be outside of the 500-year floodplain. This project will not have an effect on the floodplain.

6.10 Marine Mammal Protection Act

The Marine Mammal Protection Act (16 U.S.C §§703 et seq.) was enacted to protect all marine mammals in U.S waters and by U.S citizens on the high seas and the importation of marine mammals and marine mammal products in the U.S. MMPA is jointly enforced by the U.S fish and Wildlife service and the National Marine Fisheries Service. The project area is located at least 1.5 miles from the nearest coastline or body of water that could support habitat for marine mammals. The proposed project will have no impact on marine mammals.

6.11 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 U.S.C §§ 703 et seq.) was created with the purpose to make it illegal possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts*, nests, or eggs of such a bird except under the terms of a valid Federal permit. Migratory bird species protected by the Act. The state of Hawaiʻi is home to 55 bird species protected by the MBTA. Birds protected by MBTA with the potential to overfly or occur within the project area include the Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot (*Fulica alai*). Conservation measures will be incorporated into the project plans and specifications to avoid or minimize impacts on these listed species.

6.12 Protection of Wetlands Executive Order

The purpose of Executive Order 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." Federal agencies, to meet these objectives, in planning their actions are required to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland is unavoidable. The procedures require the determination of whether or not the proposed project will be in or will affect wetlands.

There are no wetlands in the vicinity of the Waiʻōhinu Transfer Station site. Executive Order 11990 is not applicable to the proposed project.

6.13 Rivers and Harbors Act

Under the Rivers and Harbors Act, (33 U.S.C. § 403) all navigable waterways in the U.S are protected under federal law. This act prohibits but is not limited to construction of any bridge, dam, dike or causeway over or in navigable water within the U.S without congressional approval and or permitting from the Authority of the Corps of Engineers.

There are no navigable waterways in the vicinity of the project area. The Rivers and Harbors Act is not applicable to the proposed project.

6.14 Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), 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 that can be approved to implement these rules on EPA's behalf, such as state governments; and to encourage attainment of secondary standards (nuisance-related). The SDWA also establishes the Sole Source Aquifer Program, under which EPA also may evaluate Federal-funded projects to determine whether they have the potential to contaminate a sole source aquifer.

The project area is located mauka of the Underground Injection Control (UIC) Line, where the underlying aquifer is considered a drinking water source. Wastewater effluent at the project site will be treated prior to disposal in a soil absorption bed that will be set well above

the water table. Proposed activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater.

6.15 Wild & Scenic Rivers Act

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

The State of Hawaiʻi has approximately 3,905 miles of river, but no designated wild and scenic rivers. The Wild & Scenic Rivers Act is not applicable to this project.

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7. DETERMINATION OF FONSI

Based on the significance criteria set forth in Chapter 200.1, Title 11, State of Hawaiʻi Department of Health Administrative Rules, it is determined that the proposed project will not have a significant effect on the environment, and a Finding of No Significant Impact (FONSI) has been issued and filed with the State Office of Environmental Quality Control following the public consultation period. The reasons supporting this determination are described below according to the following significance criteria:

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

Development of the proposed project would require an irrevocable commitment of energy, labor, capital, and materials for construction. Additional land is required for the construction of the project. An area south of the existing disposal chutes would be cleared and graded to construct the proposed sort building and IWS. Areas within the existing footprint of the transfer station would be improved and reconfigured to improve ease of use and traffic flow. These uses are consistent with the current use of the project area. Given the proximity to the footprint of existing operations, the land is deemed unsuitable for any other use.

Proposed uses at the site would require provision of utility services, such as water, wastewater, electrical, and telecommunications. Additional demand is anticipated to be minimal and would be coordinated with the appropriate agencies to confirm availability and capacity. All development related runoff would be retained onsite and would be directed to shallow drywells as required. No significant adverse impacts to natural resources are anticipated.

The site has been used as a transfer station for several decades. No significant impacts on flora or fauna species are anticipated due to the construction and operation of the project. Additionally, no effects to any significant historic sites are anticipated as a result of constructing the project. There is no reported ongoing traditional gathering or hunting practices occurring within the project area itself. Therefore, it is anticipated that the proposed project would have no adverse impact on traditional cultural properties or practices, gathering rights, or access.

(2) Curtails the range of beneficial uses of the environment;

Considering the project involves an area already occupied by a permitted transfer station, no future beneficial uses of the environment would be affected by the proposed action.

(3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;

The project does not conflict with long-term environmental policies or goals and guidelines of the State of Hawaiʻi. Upon repairing and enhancing the transfer station, DEM would continue to implement its current solid waste management program as well as explore other waste diversion strategies to reduce the flow of waste to landfills.

(4) Substantially affects the economic or social welfare of the community or state;

The proposed action simply represents the repair and enhancement of an existing activity and is not anticipated to substantially affect the economic or social welfare of the community or state.

(5) Substantially affects public health;

The proposed action involves repairing and enhancing the existing transfer station, which would positively benefit public health through improvement of a facility essential for nearby communities to appropriately manage solid waste.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

The project is not anticipated to induce growth beyond that which is already anticipated for the region. Therefore, secondary impacts associated with population changes or effects on public facilities are not anticipated with implementation of the proposed project.

(7) Involves a substantial degradation of environmental quality;

The proposed project would not involve substantial degradation of environmental quality. The tipping floor is proposed to be enclosed to contain waste, minimize noise, and collect leachate from the trash. All development related runoff would be retained on site and directed to shallow drywells as required. Any leachate from the tipping floor would be treated prior to disposal.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed project involves the repair and enhancement of an existing transfer station and is not anticipated to have considerable cumulative effects on the environment. Due to the temporary nature of construction activities and the relatively small scope of improvements, any potential impacts are anticipated to be negligible. Any long-term impacts would be mitigated by continuing existing waste diversion efforts and exploring new strategies intended to reduce the amount of waste disposed at County landfills. The proposed project does not involve a commitment for larger actions.

(9) Substantially affects rare, threatened, or endangered species, or its habitat;

No threatened or endangered species of flora or fauna are anticipated to be adversely affected by the repairs and enhancements. The proposed project would primarily affect an area currently utilized as an active transfer and recycling station. No listed or proposed endangered or threatened species and their habitat are known to occur within the project area. Impacts on endangered or threatened species that may overfly or potentially occur within the project area would be mitigated by incorporating recommended mitigation measures into the project plans and specifications.

(10) Detrimentally affects air or water quality or ambient noise levels;

Temporary impacts related to vehicle emissions and fugitive dust associated with construction activities is anticipated to be minimal and temporary in nature. No water quality

impacts are anticipated with implementation of the proposed project as there are no surface waters in the vicinity of the Wai‘ōhinu Transfer Station. Noise generated by temporary construction activities would be similar in character and intensity to existing noise conditions and is not anticipated to have an adverse effect to overall noise levels.

In the long-term, proposed mulching activities would introduce a new source of noise to the project area. It is anticipated that the noise generated by mulching activities would be similar in character and intensity to existing noise generators in the project area and would be offset by a reduction in noise generated by truck traffic and vehicles servicing the Wai‘ōhinu Transfer Station with construction of the tipping floor within an enclosed structure. Potential impacts to sensitive receptors in the vicinity would be further mitigated by limiting hours of mulching activities to occur intermittently on weekdays within standard daytime work hours. The project is not anticipated to result in significant noise impacts in the long-term.

(11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;

The Wai‘ōhinu Transfer Station is located outside of the 500-year flood plain and outside of the tsunami hazard zone. No surface water body, such as rivers, streams, lakes, ponds or wetlands, occur in the vicinity. Seismic and lava flow hazards do pose a minimal threat to the site; however, measures would be taken to the extent feasible to protect the station from such threats.

(12) Substantially affects scenic vistas and view planes identified in county or state plans or studies; or,

Scenic vistas and view planes are not anticipated to be substantially affected by the proposed project. The Wai‘ōhinu Transfer Station is presently visible only from areas that are a significant distance away on the upper slopes of areas mauka of the transfer station.

(13) Requires substantial energy consumption.

Construction and operation at the transfer station would require minimal consumption of energy. However, this consumption of energy would be minimal and is not anticipated to have a significant adverse effect.

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8. CONSULTATION

8.1 Pre-Assessment Consultation

The following agencies and organizations were consulted during the EA pre-assessment consultation process. Consultation was conducted to solicit comments regarding potential concerns and requirements pursuant to refining the scope of EA documentation. Parties that formally replied during the pre-assessment period are indicated by a "✓" below. All written comments are reproduced and included herein as Appendix A.

Federal Agencies

U.S. Department of Agriculture, Natural Resources Conservation Service
U.S. Environmental Protection Agency
✓ U.S. Fish and Wildlife Service
U.S. Geological Survey, Pacific Islands Water Science Center
National Oceanic and Atmospheric Administration, National Marine Fisheries Service

State Agencies

✓ Department of Accounting & General Services
Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Office of Planning
Department of Defense
✓ Department of Education
Department of Hawaiian Home Lands
Department of Health (DOH), Clean Air Branch
DOH, Clean Water Branch
DOH, Safe Drinking Water Branch
DOH, Solid and Hazardous Waste Branch
✓ DOH, Wastewater Branch
DOH, Hazard Evaluation and Emergency Response Office
DOH, Office of Environmental Quality Control
Department of Land and Natural Resources (DLNR)
DLNR, Division of Forestry and Wildlife
DLNR, State Historic Preservation Division
✓ DLNR, Land Division
Department of Transportation
Hawaiʻi State Legislature, House District 5
Hawaiʻl State Legislature, Senate District 3
Office of Hawaiian Affairs

County of Hawaiʻi

Department of Parks & Recreation
✓ Department of Public Works
Department of Research and Development
✓ Department of Water Supply
Fire Department
Mass Transit Agency
Office of the Mayor

- ✓ Planning Department
- ✓ Police Department
- ✓ Hawaiʻi County Council, District 6

Utilities

Hawaiian Electric Company
Hawaiian Telcom
Spectrum Hawaiʻi

Other Interested Parties and Individuals

Hawaii Wildlife Fund
Discovery Harbour Community Association
Kāʻū Hawaiian Home Lands Association
Michael T. Omija Trust
Michael A. & Ms. Linda S. Fortin
AA Aluminum Products Inc.
Thomas G. Favara
Thomas C. Rosenbaum Trust
✓ Ermino Mazzarino
John & Ms. Nora M. Mc Aleavy
Clarence & Ms. Pauline L. Young & c/o Paul Keliipio
Cynthia Emmsley, et al.
James Norman Handly
Gary T. & Ms. Charlene H. Yamagata
Verna E. Kaawa
Evelyn R. Smith
Charmaine L. Keanu
Edward K. Young Trust
Mollie P. Lalakea Trust
Alice K. Sanborn Estate
Penney Lynn Breithaupt Trust
Lily K. Auld & c/o Warnice K. Hanamaikai
Elizabeth K. Serrao
Kawakami Family Trust
Helen K. Cajigal & c/o Galen K. Cajigal
Peter P. Brant 2009 Trust
Herman K. Awai, et al.
Scott Andrew McFadden, et al.
Iglesia NI Cristo & c/o Lorenzo V. De Vera
Paul R. Harder
Winifred Pele Hanoa
William A. & Ms. Toni Lynn Hilley
Todd Quartemont
Ernest B. Breithaupt
Helen Gloria E. Velez
Wallace & Ms. Bertha K. Young
Georgia Pele Dods, et al.
Ipaapuka Kekoa Estate

- ✓ Roy T. Kamitaki & Ms. Theresa M. Lyon
  Lau Family Trust
  Richard E. & Ms. Shirley Bolton
  Jennifer Susanne Johnson
  Lani Sueko Holbron
  James A. & Ms. Marcia L. Masters
  Frank Kawaauhau & c/o Diana U K Terukina
  Gregory Alan & Ms. Betsy Leihulu Wittman
  Elizabeth Elarionoff Trust
  Pernell E. Hanoa
  Karen Valentine
  Charles Aloi Akiu, Jr. & c/o Augustine Akiu
  Kuahiwi Contractors
  HMP Inc., d.b.a. Business Services Hawaii
  Atlas Recycling Centers, LLC
  Transfer Station Thrift Store, LLC
  Walter D. Andrade

8.2 Draft Environmental Assessment Consultation

The Draft Environmental Assessment for the Waiʻōhinu Transfer Station Repairs and Enhancements was published in the Office of Environmental Quality Control's May 8, 2020 issue of *The Environmental Notice*. Publication initiated a 30-day public review period ending on June 8, 2020. All written comments and responses are reproduced in Appendix B. Parties that provided written responses during the public review period are listed below.

State Agencies

Department of Health (DOH), Clean Air Branch

Other Interested Parties and Individuals

Sandra Demoruelle

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9. REFERENCES

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Appendix A

Pre-Assessment Consultation Documentation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

In Reply Refer to:
01EPIF00-2020-TA-0135

February 5, 2020

Ms. Rebecca Candilasa
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Subject: Technical Assistance for the Pre-Consultation for an Environmental Assessment for the Waiohinu Transfer Station Repairs and Enhancement Project in Naalehu, Island and County of Hawaii

Dear Ms. Rebecca Candilasa:

The U.S. Fish and Wildlife Service (Service) received your correspondence on January 21, 2020, requesting technical assistance for the Pre-Consultation for an Environmental Assessment for the proposed Waiohinu Transfer Station Repairs and Enhancements project. The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

Project Description

The proposed project consists of reconfiguring the Waiohinu site to improve ease-of-use and traffic flow, enhancing the various collection areas, and performing other work needed to provide internal roadways, drainage, an individual wastewater system, and utilities. Collections area for new waste streams will be provided and exisiting transfer station operations will be relocated on the south side of the existing transfer chute. Kauila road improvements will remain within the existing right-of-way and will be limited to the minium necessary to provide a smooth transition to the stablized roadway on-site.

Improvements associated with the project are intended to support the following components: Recycling area for mixed recyclables, non-HI-5 glass, scrap metals, and white goods; ReUse area to be used by a contracted vendor, HI-5 redemption area also to be used by a contracted vendor, a green waste area, nets to energy area, and a tipping building with dedicated tipping floor for residential and commercial solid waste.

Based on information you provided in the Use Permit Application and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, there are six listed animal species in the immediate vicinity of the project area: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot (*Fulica alai*).

The Hawaiian hawk (*Buteo solitaries*), which was recently removed from the federal list of threatened and endangered species, continues to be State-listed as endangered under HRS 195-D.

The Service recommends the following measures to avoid and minimize project impacts to the following listed species:

Hawaiian hoary bat

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, 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. Additionally, Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian hawk

The Hawaiian hawk, which was recently removed from the federal list of threatened and endangered species, continues to be State-listed as endangered under HRS 195-D. The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

To avoid and minimize impacts to Hawaiian hawks we recommend you incorporate the following applicable measures into your project description:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, have a biologist familiar with the species conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
    - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, conduct another survey.

- No clearing of vegetation or construction activities should occur within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest, as nests may be re-used during consecutive breeding seasons.

Hawaiian petrel, Newell's shearwater, and band-rumped storm petrel

Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could 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 they 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 avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Hawaiian stilt and Hawaiian coot

Listed Hawaiian waterbirds are found in fresh and brackish-water marshes and natural or man-made ponds. 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.

Based on the project details provided, our information suggests that your project may result in standing water or the creation of open water, thus attracting Hawaiian waterbirds to the site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g. any ponding water), if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

To avoid and minimize potential project impacts to Hawaiian waterbirds, we recommend you incorporate the following applicable measures into your project description:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design (see enclosure).
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
    - Contact the Service within 48 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
    - Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Biosecurity and Invasive Species

Please see the attached Biosecurity Protocols to prevent the introduction and spread of harmful invasive species on the island of Hawaii.

If this potential project should receive federal funding, federal permits, or any federal authorization, it will require a Section 7 consultation with the Service. The Service only conducts Section 7 consultations with the federal action agency or their designated representative.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns regarding this consultation, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-933-6964, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference numbers: ***01EPIF00-2020-TA-0135***.

Sincerely,

MICHELLE BOGARDUS Digitally signed by MICHELLE BOGARDUS Date: 2020.02.05 21:37:10 -10'00'

Michelle Bogardus
Island Team Manager
Maui Nui and Hawaii Island

BIOSECURTY PROTOCOL – HAWAII ISLAND (JULY 2018)

The following biosecurity protocol (based on National Park Service, State of Hawaii, U.S. Fish and Wildlife, U.S. Geological Survey, and the DOI Office of Native Hawaiian Relations guidance) should be followed when operating on Hawaii Island to prevent the introduction of harmful invasive species including frogs, ants, weeds, and fungi into local natural areas (e.g., Hawaii Volcanoes National Park, Hakalau Forest National Wildlife Refuge, State of Hawaii "Natural Areas") and areas with native habitat (habitat that is primarily composed of native vegetation), other islands in Hawaiian archipelago, or the U.S. mainland. The protocol also includes suggestions for keeping field staff safe from certain invasive species.

1. All work vehicles, machinery, and equipment should be cleaned, inspected by its user, and found free of mud, dirt, debris and invasive species prior to entry into the natural areas or native habitat.

a. Vehicles, machinery, and equipment must be thoroughly pressure washed in a designated cleaning area and visibly free of mud, dirt, plant debris, insects, frogs (including frog eggs) and other vertebrate species such as rats, mice and non-vegetative debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds (truck beds with accumulated material (intentionally placed or fallen from trees) are prime sites for hitchhikers).

b. The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats shall be sanitized with a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat. Treatment is the responsibility of the equipment or vehicle owner and operator.

2. Little Fire Ants – All work vehicles, machinery, and equipment should be inspected for invasive ants prior to entering the natural areas or native habitat.

a. A visual inspection for little fire ants should be conducted prior to entry into natural areas or native habitat.

b. Hygiene is paramount but even the cleanest vehicle can pick up a little fire ant. Place MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) into refillable tamper resistant bait stations. An example of a commercially available refillable tamper resistant bait station is the Ant Café Pro (https://www.antcafe.com/). Place a bait station (or stations) in vehicle. Note larger vehicles, such as trucks, may require multiple stations. Monitor bait stations frequently (every week at a minimum) and replace bait as needed. If the station does not have a sticker to identify the contents, apply a sticker listing contents to the station.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat until it is sanitized and re-tested following a resting period. Infested vehicles must be sanitized following recommendations by

the Hawaii Ant Lab (http://www.littlefireants.com/) or other ant control expert and in accordance with all State and Federal laws. Treatment is the responsibility of the equipment or vehicle owner.

d. Gravel, building materials, or other equipment such as portable buildings should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) or AmdroPro (0.73% Hydramethylnon; http://littlefireants.com/Amdro%20Pro.pdf) following label guidance.

e. Storage areas that hold field tools, especially tents, tarps, and clothing should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) or AmdroPro (0.73% Hydramethylnon; http://littlefireants.com/Amdro%20Pro.pdf) following label guidance.

3. Base yards and staging areas inside and outside areas must be kept free of invasive species.

a. Base yards and staging areas should be inspected at least weekly for invasive species and any found invasive removed immediately. Pay particular attention to where vehicles are parked overnight, keeping areas within 10-meters of vehicles free of debris. Parking on pavement and not under trees, while not always practical is best.

b. Project vehicles or equipment stored outside of a base yard or staging area, such as a private residence, should be kept in a pest free area.

4. All cutting tools must be sanitized to prevent the Rapid Ohia Death (ROD) fungus.

a. Avoid wounding ohia trees and roots with mowers, chainsaws, weed eaters, and other tools. Cut only the minimum amount of trees and branches as approved for the project.

b. All cutting tools, including machetes, chainsaws, and loppers must be sanitized to remove visible dirt and other contaminants prior to entry into natural areas or areas with native habitat, and when moving to a new project area within the native habitat area. Tools may be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution. One minute after sanitizing, you may apply an oil based lubricant to chainsaw chains or other metallic parts to prevent corrosion.

c. Only dedicated tools and chainsaws should be used to sample known or suspected ROD infected trees.

d. Vehicles, machinery, and equipment must be cleaned as described in (1) above.

5. Imported firewood, logs, and ohia parts:

a. Ohia firewood, ohia logs, and ohia parts should not be transported.

6. For individuals working in the field:

a. **Before going into the field**, visually inspect and clean your clothes, boots, pack, radio harness, tools and other personal gear and equipment, for seeds, soil, plant parts, insects, and other debris. A small brush is handy for cleaning boots, equipment and gear. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

b. **Immediately before leaving the field,** visually inspect and clean your clothes, boots, pack, radio harness, tools, and other personnel gear and equipment, for seeds, soil, plant parts, insects, and other debris. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. **Little fire ants nest in trees.** If you are under a tree and that tree is bumped or somehow stressed, the threat response of the ants is to fall from the leaves and sting the person under the tree. If you are subject to an ant attack, do not panic. The ants are extremely small but their stings are painful so make sure you remove all ants from your body and clothing. The stings cause inch long welts that are itchy and painful, and can last for weeks. Treat stings as you would other insect stings. In some persons stings can produce life threatening reactions. Stocking antihistamine in the first aid kit is a reasonable precaution.

d. **Rat Lungworm disease** is caused by a parasite that can infect humans who consume raw or undercooked infected snails or slugs or consume raw produce that contains a small infected snail or slug. Infection is rare but can be serious. Symptoms can include severe headache, neck stiffness, low grade fever, nausea, and vomiting anywhere from 1-6 weeks after exposure. The disease is not spread person to person. Anyone who handles snails or slugs should wear gloves and/or wash hands. Eating unwashed produce is discouraged.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Ms. Michelle Bogardus, Island Team Manager
Maui Nui and Hawai'i Island
Pacific Islands Fish and Wildlife Office
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Ms. Bogardus:

Thank you for your letter dated February 5, 2020 (01EPIF00-2020-TA-0135) regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The scope of your comments is acknowledged and will be incorporated into the EA process moving forward. Consultation pursuant to Section 7 of the Endangered Species Act of 1973 will be undertaken by the appropriate agency authorities.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

DAVID Y. IGE
GOVERNOR

CURT T. OTAGURO
COMPTROLLER

AUDREY HIDANO
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)19.291

FEB 1 1 2020

Ms. Rebecca Candilasa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Ms. Candilasa:

Subject: Environmental Assessment Pre-Assessment Consultation for
Waiohinu Transfer Station Repairs and Enhancements
Naalehu, Hawaii Island
Tax Map Key (TMK): (3) 9-5-005:001

Thank you for the opportunity to provide comments on the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call Mr. David DePonte of the Planning Branch at 586-0492.

Sincerely,

CHRISTINE L. KINIMAKA
Public Works Administrator

DD:jl
c: Mari Joy Angsioco, DAGS Hawaii District Office

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Ms. Christine L. Kinimaka, Public Works Administrator
Department of Accounting and General Services
State of Hawai'i
P.O. Box 119
Honolulu, Hawai'i 96810-0119

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Ms. Kinimaka:

Thank you for your letter dated February 11, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation. We acknowledge that the Department of Accounting and General Services has no comments to offer at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 18, 2020

Wilson Okamoto Corporation
Attn: Ms. Rebecca Candilasa
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

via email: woc@wilsonokamoto.com

Dear Ms. Candilasa:

SUBJECT: Environmental Assessment Pre-Assessment Consultation for **Wai'ohinu Transfer Station** Repairs and Enhancements located at Na'alehu, District of Ka'u, Island of Hawaii; TMK: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way on behalf of the County of Hawaii Department of Environmental Management

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division, (b) Division of Forestry & Wildlife, (c) Commission on Water Resource Management, and (d) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 23, 2020

MEMORANDUM

RECEIVED
2020 JAN 30 AM 10:52
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII
LAND DIVISION

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation (via email: DLNR.Intake.SHPD@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Environmental Assessment Pre-Assessment Consultation for **Wai'ohinu Transfer Station** Repairs and Enhancements
LOCATION: Na'alehu, District of Ka'u, Island of Hawaii; TMK: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way
APPLICANT: Wilson Okamoto Corporation on behalf of County of Hawaii Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments by **February 13, 2020.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417 or by email at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 1/29/20

Attachments
cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Environmental Assessment Pre-Assessment Consultation for Wai'ohinu Transfer Station Repairs and Enhancements
TMK(s): (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way
Location: Na'alehu, District of Ka'u, Island of Hawaii
Applicant: Wilson Okamoto Corporation on behalf of County of Hawaii Department of Environmental Management

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 1/29/20

2473

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2020 JAN 27 AM 10:50

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 23, 2020

MEMORANDUM

~~TO:~~ From

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation (via email: DLNR.Intake.SHPD@hawaii.gov)

~~TO~~
~~FROM:~~ Russell Y. Tsuji, Land Administrator
SUBJECT: Environmental Assessment Pre-Assessment Consultation for **Wai'ohinu Transfer Station** Repairs and Enhancements
LOCATION: Na'alehu, District of Ka'u, Island of Hawaii; TMK: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way
APPLICANT: Wilson Okamoto Corporation on behalf of County of Hawaii Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments by **February 13, 2020.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417 or by email at darlene.k.nakamura@hawaii.gov. Thank you.

(✓) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Print Name: **DAVID G. SMITH, Administrator**
Date: JAN 24 2020

Attachments
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2020 FEB 13 AM 10:45
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2020 JAN 23 PM 2:57

January 23, 2020

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation (via email: DLNR.Intake.SHPD@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Environmental Assessment Pre-Assessment Consultation for **Wai'ohinu Transfer Station** Repairs and Enhancements
LOCATION: Na'alehu, District of Ka'u, Island of Hawaii; TMK: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way
APPLICANT: Wilson Okamoto Corporation on behalf of County of Hawaii Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments by **February 13, 2020.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417 or by email at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
(x) Comments are attached.

Signed: /s/ M. Kaleo Manuel

Print Name: Deputy Director

Date: February 10, 2020

Attachments
cc: Central Files

FILE ID: RFD.5317.8
DOC ID: 22160

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON

BRUCE S. ANDERSON, PH.D.
KAMANA BEAMER, PH.D.
MICHAEL G. BUCK
NEIL J. HANNAHS
WAYNE K. KATAYAMA
PAUL J. MEYER

M. KALEO MANUEL
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

February 10, 2020

REF: RFD.5317.8

TO: Mr. Russell Tsuji, Administrator
Land Division

FROM: M. Kaleo Manuel, Deputy Director
Commission on Water Resource Management

SUBJECT: Environmental Assessment Pre-Assessment Consultation for Waiohinu Transfer Station Repairs and Enhancements

FILE NO.: RFD.5317.8
TMK NO.: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

☐ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☐ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

☐ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.

☒ 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/

☐ 6. We recommend the use of alternative water sources, wherever practicable.

☐ 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.

☒ 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at

http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

☐ 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

☐ 11. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.

☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 14. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.

☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.

☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☐ OTHER:

If you have any questions, please contact Lenore Ohye of the Commission staff at 587-0216.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
2020 JAN 27 A 8:11
LAND DIVISION
HILO, HAWAII

January 23, 2020

MEMORANDUM

RECEIVED
2020 FEB 10 AM 8:11
LAND DIVISION

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation (via email: DLNR.Intake.SHPD@hawaii.gov)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Environmental Assessment Pre-Assessment Consultation for **Wai'ohinu Transfer Station** Repairs and Enhancements
LOCATION: Na'alehu, District of Ka'u, Island of Hawaii; TMK: (3) 9-5-005: por. 001 and por. Kaulia Road Right-of-Way
APPLICANT: Wilson Okamoto Corporation on behalf of County of Hawaii Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments by **February 13, 2020.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417 or by email at darlene.k.nakamura@hawaii.gov. Thank you.

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: [signature]
Print Name: GORDON C. HEIT
Date: 2/7/20

Attachments
cc: Central Files

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Russell Y. Tsuji, Land Administrator
Land Division
Department of Land and Natural Resources
State of Hawai'i
P.O. Box 621
Honolulu, Hawai'i 96809

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Tsuji:

Thank you for your letter dated February 18, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

We received comments from the Engineering Division (ED) and the Commission on Water Resource Management (CWRM). The scope of these comments is acknowledged and will be incorporated into the EA process moving forward. We further acknowledge that the Division of Forestry & Wildlife (DFW) and Land Division – Hawai'i District had not comments to offer at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF FACILITIES AND OPERATIONS

February 3, 2020

Ms. Rebecca Candilasa
Wilson Okamoto Corporation
1907 Beretania Street, Suite 400
Honolulu, Hawaii 96826

Re: Environmental Assessment Pre-Assessment Consultation for Waiohinu Transfer Station Repair and Enhancements, Naalehu, Hawaii TMK 9-5-005:001

Dear Ms. Candilasa:

The Hawaii State Department of Education (HIDOE) has no comments at this time for the Environmental Assessment Pre-Assessment Consultation for Waiohinu Transfer Station Repair and Enhancements at Naalehu, Island of Hawaii, TMK 9-5-005:001.

Further comments will be provided once HIDOE has an opportunity to review the draft environmental assessment.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, Acting Land Use Planner, Facilities Development Branch, Planning Section, at 784-5093 or via email at robyn.loudermilk@k12.hi.us.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:rll

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Kenneth G. Masden II, Public Works Manager
Planning Section
Department of Education
State of Hawai'i
P.O. Box 2360
Honolulu, Hawai'i 96804

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Masden:

Thank you for your letter dated February 3, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation. We acknowledge the Department of Education has not comments at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DAVID Y. IGE
GOVERNOR OF HAWAII

BRUCE S. ANDERSON, Ph.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

January 28, 2020

90-09 ltr DEApac.docx

Rebecca Candilasa, Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826
Email: RCandilasa@WilsonOkamoto.com

Dear Ms. Candilasa:

Subject: Draft Environmental Assessment (DEA) Pre-Assessment Consultation
Wai'ōhinu Transfer Station Leachate Collection System
Clean Water State Revolving Fund (CWSRF) Project No. NPS00 90-09
Na'alehu, Hawai'i Island, TMK: (3) 9-5-005:001

Thank you for allowing us the opportunity to provide comments for the subject DEA Pre-Assessment Consultation. The subject project may be funded by the State of Hawai'i Clean Water State Revolving Fund (CWSRF) Program. If this is the case, then please ensure that the subject DEA and Final EA documents comply with all applicable federal environmental cross-cutting authorities and the Hawai'i State Environmental Review Process as required by the CWSRF Program.

Should you have any questions, please contact Chane Hayashida at (808) 586-4294.

Sincerely,

SINA PRUDER, P.E., CHIEF
Wastewater Branch

CH:sp

c: Mr. Gregory Goodale (via email at Gregory.Goodale@hawaiicounty.gov)
Mr. Gene Quiamas (via email at Gene.Quiamas@hawaiicounty.gov)
Ms. Amy Cook (via email at Amy.Cook@doh.hawaii.gov)
Mr. Dane Hiromasa (via email at Dane.Hiromasa@doh.hawaii.gov)

WILSON OKAMOTO CORPORATION
INNOVATORS - PLANNERS - ENGINEERS

10530-01
May 5, 2020

Ms. Sina Pruder, P.E., Chief
Wastewater Branch
Department of Health
State of Hawai'i
P.O. Box 3378
Honolulu, Hawai'i 96801-3378

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Ms. Pruder:

Thank you for your letter dated January 28, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The EA will be prepared in compliance with all applicable federal environmental cross-cutting authorities and the Hawai'i State Environmental Review process as required by the State of Hawai'i Clean Water State Revolving Fund (CWSRF) Program.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

Maile Medeiros David
Council District 6
Portion N. S. Kona/Ka'ū/Volcano

Phone: (808) 323-4277
Fax: (808) 329-4786
Email: maile.david@hawaiicounty.gov

HAWAI'I COUNTY COUNCIL

County of Hawai'i
West Hawai'i Civic Center, Bldg. A
74-5044 Ane Keohokalole Hwy.
Kailua-Kona, Hawai'i 96740

January 24, 2020

Wilson Okamoto Corporation
Attention: Ms. Rebecca Candilasa
1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Re: Environmental Assessment Pre-Assessment Consultation for
Wai'ōhinu Transfer Station Repairs and Enhancements
Nā'ālehu, Hawai'i Island, Hawai'i - TMK: (3) 9-5-005:001

Aloha Ms. Candilasa,

This is to acknowledge receipt of, and thank you for the proposed Draft Environmental Assessment (EA) pre-assessment for the Wai'ōhinu Transfer Station located in the District of Ka'ū, dated January 16, 2020.

After having reviewed your pre-assessment report, I cannot express the importance and significance, to the Ka'ū Community, of the repairs and modifications being proposed. As stated, once in compliance with the Solid Water Management Permit (SWMP), the proposed project will be submitted to DOH for their review. Once DOH has approved, and DEM submits their necessary applications, we look forward to proceeding with the much needed repairs and improvements to the Wai'ōhinu Transfer Station.

Mahalo a nui loa for your work on the proposed EA project and should there be anything I could do to assist with expediting any part of the process, please do not hesitate to contact me.

Sincerely,

Maile David, Council Member
Council District 6

MD:dmm

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Ms. Maile David, Council Member
Council District 6
County of Hawai'i
Hawai'i County Council
West Hawai'i Civic Center, Bldg. A
74-5044 Ane Keohokalole Hwy.
Kailua-Kona, Hawai'i 96740

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i – Tax Map Key: (3) 9-5-005:001

Dear Council Member David:

Thank you for your letter dated January 24, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

We appreciate your acknowledgement of the importance and significance of this project.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

Mahalo for your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

Harry Kim
Mayor

Roy Takemoto
Managing Director

David Yamamoto, P.E.
Director

Allan G. Simeon, P.E.
Deputy Director

County of Hawai'i
DEPARTMENT OF PUBLIC WORKS
Aupuni Center
101 Pauahi Street, Suite 7 · Hilo, Hawai'i 96720-4224
(808) 961-8321 · Fax (808) 961-8630
public_works@hawaiicounty.gov

February 14, 2020

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
Attention: Ms. Rebecca Candilasa

SUBJECT: EARLY CONSULTATION FOR DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIOHINU TRANSFER STATION REPAIRS AND ENHANCEMENTS NAALEHU, ISLAND OF HAWAII, HAWAII
TMK: (3) 9-5-005:001

We have reviewed the request for early consultation for a draft Environmental Assessment dated January 16, 2020 and have the following comments:

1. All development generated runoff shall be disposed of on-site and shall not be directed toward adjacent properties. A drainage study shall be prepared by a licensed civil engineer and the recommended drainage system shall be constructed meeting the approval of the Department of Public Works.

2. All earthwork and grading activity shall conform to Chapter 10, Erosion and Sedimentary Control, of the Hawaii County Code.

3. All driveway connections and construction within the Kaulia Road, Kamikina Street, and Kamaoa Road Right-of-Way shall conform to Chapter 22, County Streets, of the Hawaii County Code. Access to Kaulia Road, Kamikina Street, and Kamaoa Road, including the provision of adequate sight distances, shall meet with the approval of the Department of Public Works, Engineering Division.

4. The subject parcel is in an area designated as Zone X on the Flood Insurance Rate Map (FIRM) by the Federal Emergency Management Agency (FEMA). Zone X is an area determined to be outside the 500-year floodplain.

Should there be any questions concerning this matter, please contact Bryce Harada of our Engineering Division at (808) 961-8042.

By

for BEN ISHII, Division Chief
Engineering Division

BH

cc: DPW Engineering – Hilo
Planning Department
Mr. Gene Quiamas, County of Hawaii - DEM

County of Hawai'i is an Equal Opportunity Provider and Employer.

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Ben Ishii, Division Chief
Engineering Division
Department of Public Works
County of Hawai'i
101 Pauahi Street, Suite 7
Hilo, Hawai'i 96720-4224

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Ishii:

Thank you for your letter dated February 14, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The scope of your comments is acknowledged and will be incorporated into the EA process moving forward.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

February 14, 2020

Ms. Rebecca Candilasa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Ms. Candilasa:

Subject: Pre-Environmental Assessment Consultation for Wai'ōhinu Transfer Station Repairs and Enhancements, Nā'ālehu, Hawai'i Island, Hawai'i
Tax Map Key 9-5-005:001

This is in response to your Pre-Environmental Assessment Consultation letter of January 16, 2020.

Please be informed that there is an existing ¾-inch meter serving the subject parcel, which is limited to an average usage of 400 gallons per day. There is an existing 8-inch waterline along Māmalahoa Highway.

If additional water is required, the Department would request estimated maximum daily water usage calculations, prepared by a professional engineer licensed in the State of Hawaii, for review. After review of the calculations, the Department will determine if the additional water is available, water commitment can be issued, a water commitment deposit amount, facilities charges due, water system improvements, and other conditions for final approval.

Should there be any questions, please contact Mr. Ryan Quitoriano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

Keith K. Okamoto, P.E.
Manager-Chief Engineer

RQ:dfg

copy – Mr. Gene Quiamas, County of Hawai'i, Department of Environmental Management

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Keith K. Okamoto, P.E., Manager-Chief Engineer
Department of Water Supply
County of Hawai'i
345 Kekūanaō'a Street, Suite 20
Hilo, Hawai'i 96720

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Okamoto:

Thank you for your letter dated February 14, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The scope of your comments is acknowledged and will be incorporated into the EA process moving forward.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

Harry Kim
Mayor

Darren J. Rosario
Fire Chief

Lance S. Uchida
Deputy Fire Chief

County of Hawai'i
HAWAI'I FIRE DEPARTMENT
25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720
(808) 932-2900 • Fax (808) 932-2928

February 17, 2020

Wilson Okamaoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'i 96826
Attention: Ms. Rebecca Candilasa

Dear Ms. Candilasa,

SUBJECT: Environmental Assessment Pre-Assessment Consultation for Wai'ōhinu Transfer Station Repairs and Enhancements Nā'ālehu, Hawai'i Island TMK: (3) 9-5-005:001

In regards to the above-referenced Environmental Assessment Pre-Assessment Consultation, the following shall be in accordance:

NFPA 1, UNIFORM FIRE CODE, 2006 EDITION
Note: Hawai'i State Fire Code, National Fire Protection Association 2006 version, with County of Hawaii amendments. County amendments are identified with a preceding "C~" of the reference code.

Chapter 18 Fire Department Access and Water Supply

18.1 General. Fire department access and water supplies shall comply with this chapter.

For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is unduly difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, and the AHJ may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved.

18.1.1 Plans.

18.1.1.1 Fire Apparatus Access. Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.

18.1.1.2 Fire Hydrant Systems. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

C~ 18.1.1.2.1 Fire Hydrant use and Restrictions. No unauthorized person shall use or operate any Fire hydrant unless such person first secures permission or a permit from the owner or representative of the department, or company that owns or governs that water supply or system. Exception: Fire Department personnel conducting firefighting operations, hydrant testing, and/or maintenance, and the flushing and acceptance of hydrants witnessed by Fire Prevention Bureau personnel.

18.2 Fire Department Access.

18.2.1 Fire department access and fire department access roads shall be provided and maintained in accordance with Section 18.2.

18.2.2* Access to Structures or Areas.

18.2.2.1 Access Box(es). The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security.

18.2.2.2 Access to Gated Subdivisions or Developments. The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access.

18.2.3 Fire Department Access Roads. (*may be referred as FDAR)

18.2.3.1 Required Access.

18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

18.2.3.1.2 Fire Department access roads shall consist of roadways, fire lanes, parking lots lanes, or a combination thereof.

18.2.3.1.3* When not more than two one- and two-family dwellings or private garages, carports, sheds, agricultural buildings, and detached buildings or structures 400ft^2 (37 m^2) or less are present, the requirements of 18.2.3.1 through 18.2.3.2.1 shall be permitted to be modified by the AHJ.

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

18.2.3.2 Access to Building.

18.2.3.2.1 A fire department access road shall extend to within in 50 ft (15 m) of at least one exterior door that can be opened from the outside that provides access to the interior of the building. Exception: 1 and 2 single-family dwellings.

18.2.3.2.1.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.1 shall be permitted to be increased to 300 feet.

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

18.2.3.4 Specifications.

18.2.3.4.1 Dimensions.

C~ 18.2.3.4.1.1 FDAR shall have an unobstructed width of not less than 20ft with an approved turn around area if the FDAR exceeds 150 feet. **Exception:** FDAR for one and two family dwellings shall have an unobstructed width of not less than 15 feet, with an area of not less than 20 feet wide within 150 feet of the structure being protected. An approved turn around area shall be provided if the FDAR exceeds 250 feet.

C~ 18.2.3.4.1.2 FDAR shall have an unobstructed vertical clearance of not less then 13ft 6 in.

C~ 18.2.3.4.1.2.1 Vertical clearances may be increased or reduced by the AHJ, provided such increase or reduction does not impair access by the fire apparatus, and approved signs are installed and maintained indicating such approved changes.

18.2.3.4.1.2.2 Vertical clearances shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

C~ 18.2.3.4.2 Surface. Fire department access roads and bridges shall be designed and maintained to support the imposed loads (25 Tons) of the fire apparatus. Such FDAR and shall be comprised of an all-weather driving surface.

18.2.3.4.3 Turning Radius.

C~ 18.2.3.4.3.1 Fire department access roads shall have a minimum inside turning radius of 30 feet, and a minimum outside turning radius of 60 feet.

18.2.3.4.3.2 Turns in fire department access road shall maintain the minimum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

18.2.3.4.5 Bridges.

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with county requirements.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges where required by the AHJ.

18.2.3.4.6 Grade.

C~ 18.2.3.4.6.1 The maximum gradient of a Fire department access road shall not exceed 12 percent for unpaved surfaces and 15 percent for paved surfaces. In areas of the FDAR where a Fire apparatus would connect to a Fire hydrant or Fire Department Connection, the maximum gradient of such area(s) shall not exceed 10 percent.

18.2.3.4.6.2* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved the AHJ.

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof of both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.2.4* Obstruction and Control of Fire Department Access Road.

18.2.4.1 General.

18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.

18.2.4.1.2 Minimum required widths and clearances established under 18.2.3.4 shall be maintained at all times.

18.2.4.1.3* Facilities and structures shall be maintained in a manner that does not impair or impede accessibility for fire department operations.

18.2.4.1.4 Entrances to fire departments access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.

18.2.4.2 Closure of Accessways.

18.2.4.2.1 The AHJ shall be authorized to require the installation and maintenance of gates or other approved barricades across roads, trails, or other accessways not including public streets, alleys, or highways.

18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.

18.2.4.2.3 Roads, trails, and other access ways that have been closed and obstructed in the manner prescribed by 18.2.4.2.1 shall not be trespassed upon or used unless authorized by the owner and the AHJ.

18.2.4.2.4 Public officers acting within their scope of duty shall be permitted to access restricted property identified in 18.2.4.2.1.

18.2.4.2.5 Locks, gates, doors, barricades, chains, enclosures, signs, tags, or seals that have been installed by the fire department or by its order or under its control shall not be removed, unlocked, destroyed, tampered with, or otherwise vandalized in any manner.

18.3 Water Supplies and Fire Hydrants

18.3.1* A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ. For on-site fire hydrant requirements see section 18.3.3.

EXCEPTIONS:

1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system the provisions of section 18.3.1 may be modified by the AHJ.
2. When water supply requirements cannot be installed due to topography or other conditions, the AHJ may require additional fire protection as specified in section 18.3.2 as amended in the code.
3. When there are not more than two dwellings, or two private garage, carports, sheds and agricultural. Occupancies, the requirements of section 18.3.1 may be modified by AHJ.

18.3.2* Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.

18.3.3* The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road on the site of the premises or both, in accordance with the appropriate county water requirements.

18.3.4 Fire Hydrants and connections to other approved water supplies shall be accessible to the fire department.

18.3.5 Private water supply systems shall be tested and maintained in accordance with NFPA 25 or county requirements as determined by the AHJ.

18.3.6 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.3.7 The AHJ shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with the respective county water requirements. Records shall be made available for review by the AHJ upon request.

C~ 18.3.8 Minimum water supply for buildings that do not meet the minimum County water standards:

Buildings up to 2000 square feet, shall have a minimum of 3,000 gallons of water available for Firefighting.

Buildings 2001- 3000 square feet, shall have a minimum of 6,000 gallons of water available for Firefighting.

Buildings, 3001- 6000 square feet, shall have a minimum of 12,000 gallons of water available for Firefighting.

Buildings, greater than 6000 square feet, shall meet the minimum County water and fire flow requirements.

Multiple story buildings shall multiply the square feet by the amount of stories when determining the minimum water supply.

Commercial buildings requiring a minimum fire flow of 2000gpm per the Department of Water standards shall double the minimum water supply reserved for firefighting.

Fire Department Connections (FDC) to alternative water supplies shall comply with 18.3.8 (1)-(6) of *this code*.

NOTE: In that water catchment systems are being used as a means of water supply for firefighting, such systems shall meet the following requirements:

1) In that a single water tank is used for both domestic and firefighting water, the water for domestic use shall not be capable of being drawn from the water reserved for firefighting;

2) Minimum pipe diameter sizes from the water supply to the Fire Department Connection (FDC) shall be as follows:
   a) 4" for C900 PVC pipe;
   b) 4" for C906 PE pipe;
   c) 3" for ductile Iron;
   d) 3' for galvanized steel.

3) The Fire Department Connection (FDC) shall:
   a) be made of galvanized steel;
   b) have a gated valve with 2-1/2 inch, National Standard Thread male fitting and cap;
   c) be located between 8 ft and 16 ft from the Fire department access. The location shall be approved by the AHJ;
   d) not be located less than 24 inches, and no higher than 36 inches from finish grade, as measured from the center of the FDC orifice;
   e) be secure and capable of withstanding drafting operations. Engineered stamped plans may be required;
   f) not be located more than 150 feet of the most remote part, but not less than 20 feet, of the structure being protected;
   g) also comply with section 13.1.3 and 18.2.3.4.6.1 of *this code*.

4) Commercial buildings requiring a fire flow of 2000gpm shall be provided with a second FDC. Each FDC shall be independent of each other, with each FDC being capable of flowing 500gpm by engineered design standards. The second FDC shall be located in an area approved by the AHJ with the idea of multiple Fire apparatus'conducting drafting operations at once, in mind.

5) Inspection and maintenance shall be in accordance to NFPA 25.

6) The owner or lessee of the property shall be responsible for maintaining the water level, quality, and appurtenances of the system.

EXCEPTIONS TO SECTION 18.3.8:

1) Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.

2) Buildings less than 800 square feet in size that meets the minimum Fire Department Access Road requirements.

3) For one and two family dwellings, agricultural buildings, storage sheds, and detached garages 800 to 2000 square feet in size, and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 1000 feet.

4) For one and two family dwellings, agricultural buildings, and storage sheds greater than 2000square feet, but less than 3000 square feet and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 500 feet.

5) For buildings with an approved automatic sprinkler system, the minimum water supply required may be modified.

If there are any questions regarding these requirements, please contact the Fire Prevention Bureau at (808) 932-2911.

DARREN J. ROSARIO
Fire Chief

CB:ds

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Darren J. Rosario, Fire Chief
Hawai'i Fire Department
County of Hawai'i
25 Aupuni Street, Suite 2501
Hilo, Hawai'i 96720

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Rosario:

Thank you for your letter dated February 17, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The scope of your comments is acknowledged and will be incorporated into the EA process moving forward.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Harry Kim
Mayor

Roy Takemoto
Managing Director

West Hawai'i Office
74-5044 Ane Keohokālole Hwy
Kailua-Kona, Hawai'i 96740
Phone (808) 323-4770
Fax (808) 327-3563

County of Hawai'i
PLANNING DEPARTMENT

Michael Yee
Director

Duane Kanuha
Deputy Director

East Hawai'i Office
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720
Phone (808) 961-8288
Fax (808) 961-8742

April 17, 2020

Ms. Rebecca Candilasa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'i 96826

Dear Ms. Candilasa:

SUBJECT: Environmental Assessment, Pre-Assessment Consultation
Project: Wai'ōhinu Transfer Station Repairs and Enhancements
TMK: (3) 9-5-005:001, Nā'ālehu, Hawai'i Island, Hawai'i

Thank you for the opportunity to provide comments on the Environmental Assessment Pre-Assessment for the subject property.

The following distinctions apply to TMK: (3) 9-5-005:001
County Zoning: A-20a
State Land Use: Agricultural
LUPAG (2005 General Plan): Extensive Agriculture (EA)

The proposed enhancements to Wai'ōhinu Transfer Station located on TMK: (3) 9-5-005:001 are consistent with the Ka'ū Community Development Plan via the following policy:

Policy 123: In consultation with residents, farmers, and vector control experts, add green waste drop-off and mulch pick-up sites in Ka'ū, with strict control of invasive species, pests, and disease.

This policy supports the establishment of green waste drop-off sites in Ka'ū. The proposed enhancements to the Wai'ōhinu Transfer Station will include the establishment of a green waste drop-off site and is therefore aligned with the direction of the Ka'ū Community Development Plan.

The proposed enhancements to the Wai'ōhinu Transfer Station located on TMK: (3) 9-5-005:001 are consistent with the County of Hawai'i General Plan via the following policy:

Policy 10.5.2 (c): Appropriately designed and cost-effective solid waste transfer station sites shall be located in areas of convenience and easy access to the public.

With the Wai'ōhinu Transfer Station already in place and in use in a convenient location it is appropriate to allow enhancement of trash collection services at the Wai'ōhinu Transfer Station to allow ease of access and use to residents in the surrounding region.

We have no further comments to offer at this time. However, please keep us informed and provide our department with a copy of the Draft Environmental Assessment for our review and comment.

If you have any questions regarding the above comments, please contact Eric Cook of this office at Eric.Cook@hawaiicounty.gov or (808) 961-8169.

Sincerely,

MICHAEL YEE
Planning Director

EC: km:lg:ks
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WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Michael Yee, Planning Director
Planning Department
County of Hawai'i
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Yee:

Thank you for your letter dated April 17, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

The scope of your comments is acknowledged and will be incorporated into the EA process moving forward.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

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We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Harry Kim
Mayor

Paul K. Ferreira
Police Chief

Kenneth Bugado, Jr.
Deputy Police Chief

County of Hawai'i
POLICE DEPARTMENT
349 Kapi'olani Street • Hilo, Hawai'i 96720-3998
(808) 935-3311 • Fax (808) 961-2389

February 12, 2020

Ms. Rebecca Candilasa
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai`i 96826

SUBJECT: ENVIRONMENTAL ASSESSMENT PRE-ASSESSMENT CONSULTATION FOR
WAIʻŌHINU TRANSFER STATION REPAIRS AND ENHANCEMENTS
NĀ`ĀLEHU, HAWAI`I ISLAND, HAWAIʻI
TMK: (3) 9-5-005:001

Dear Ms. Candilasa:

Thank you for allowing us the opportunity to provide input during this phase of the Draft Environmental Assessment (EA) pre-assessment of the Waiʻōhinu Transfer Station repair and enhancement project in Nā`ālehu.

The Hawai`i Police Department has reviewed the summary of the proposed project and associated figures and has no comments or concerns at this time.

Should you have any questions or concerns, please contact Captain Miles Chong, Commander of our Kaʻū Patrol Division, at phone number (808) 939-2520, or via email at Miles.Chong@hawaiicounty.gov.

Sincerely,

PAUL. K. FERREIRA
POLICE CHIEF

ROBERT WAGNER
ASSISTANT POLICE CHIEF
AREA II OPERATIONS

MC/jaj
20HQ0068

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Paul K. Ferreira, Police Chief
Police Department
County of Hawai'i
349 Kapi'olani Street
Hilo, Hawai'i 96720-3998

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Ferreira:

Thank you for your letter dated February 12, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

We acknowledge the Hawai'i Police Department has no comments or concerns at this time.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

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We appreciate your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

January 22, 2020

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

RE: REPAIRS TO THE WAIOHINU/NAALEHU TRANSFER STATION

Ms. Rebecca Candilasa,

It's about time ! Yes, absolutely repair the transfer station.

It's been several years back now that the residents of Waiohinu, Naalehu and as far as Ocean View to near Pahala, were told that the transfer station was unsafe to drive onto the apron to the dump to unload. The only explanation given; the underpinning is compromised and unable to support vehicle weight.

Then came the new papers reporting's that the transfer station repairs were going out to bid. Then came the silence. For several years the residents of Waiohinu, Naalehu and the extended areas have had to carry their trash from behind a large rock barrier to the dump site. If one is hauling bags, that's makes the process little easier. However, our rural environment doesn't always allow for suck neat packaging of waste. Also, our aged population have a difficult time disposing of green matter and large bags becomes messy and problematic.

Perhaps a year ago, rumors started that a new transfer station was being built in Ocean View and the Waiohinu station was to be abandoned.

Finally, a message from you and hope after receiving your letter of intent. The repair process seems to be official ? Headway is being made for the repairs to the Waiohinu transfer station. That is outstanding news. Even better news: the upgrades to the station, including better recycling systems for glass, other than HI5, hopefully will include, a badly needed plastics recycling station and paper recycling. I strongly support the recycling efforts and I'm certain, so do most of the residents in our areas.

Recently, other countries have refused to accept our containers of plastic trash. The need to reconstitute our trash may, at this time, is not as urgent for our island as it is for Oahu, Maui and Kuai, it's only a matter of time until we also, must consider how to reuse and conserve our trash items. The other mentioned islands are incorporating; trash saving education programs for residents. The programs are designed to educate residents to help keep trash out of the dump. Some counties are enforcing alternatives to help curd the us plastic in the marketplace. All such efforts help. Helps the individual resident and to preserve our beautiful islands. As our island becomes more and more desirable to visitors, two major issues will become prominent: 1) water and 2) trash disposal.

I applaud your efforts, thank you.

Ermino Mazzarino

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Ermino Mazzarino
P.O. Box 721176
Nā'ālehu, Hawai'i 96722

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Mazzarino:

Thank you for your letter dated January 22, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

We appreciate your interest in the project and acknowledge the scope of your comments.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

Mahalo for your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Roy T. Kamitaki
Theresa M. Lyon
PO. Box 763
Naalehu, HI 96772
(808) 938-9767

February 10, 2020

Wilson Okamoto Corporation
Attention: Rebecca Candilasa
1907 S. Beretania Street, Ste 400
Honolulu, HI 96826

Re: Environmental Assessment Pre-Assessment Consultation for
Waiohinu Transfer Station

Dear Ms. Candilasa,

The Waiohinu transfer station is a prominent part of our neighborhood, so thank you for offering the opportunity to comment on the changes happening here.

Two aspects particularly concern us:

1. Noise exacerbated by topography: This is not clear on a map, but the location of the transfer station sits in a natural bowl, a V-shaped valley surrounded by steep hills that capture and amplify all the local sounds, especially the loud, sharp sounds of trucks and dumping. Whatever else changes, this problem should, at the very least, not get any worse.

2. Impact on Io, our native hawk: The garbage attracts feral cats, and probably rats and other pests. In control efforts, please ensure poisons are avoided since they might also kill the Io which fly regularly in the neighborhood.

Because of the prominence of the station and proximity to our home, we hope control of the sounds and traffic and other hazards can be part of your plan.

Sincerely,

Roy T Kamitaki
Theresa M Lyon

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
May 5, 2020

Mr. Roy T Kamitaki
Ms. Theresa M. Lyon
P.O. Box 763
Nā'ālehu, Hawai'i 96772

Subject: Environmental Assessment Pre-Assessment Consultation
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i - Tax Map Key: (3) 9-5-005:001

Dear Mr. Kamitaki and Ms. Lyon:

Thank you for your letter dated February 10, 2020 regarding the subject Environmental Assessment (EA) Pre-Assessment Consultation.

We appreciate your interest in the project. The scope of your comments is acknowledged and will be incorporated into the EA process moving forward.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. It is anticipated that the Draft EA will be published and available for review in the May 8, 2020 issue of the Office of Environmental Quality Control's (OEQC) Environmental Notice. Please use the following link to view the May 8, 2020 issue of the Notice:

(http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-05-08-TEN.pdf)

Mahalo for your participation in the EA Pre-Assessment Consultation review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

Appendix B

Draft Environmental Assessment Consultation Documentation

Rebecca Candilasa

From: Cab General <Cab.General@doh.hawaii.gov>
Sent: Tuesday, May 26, 2020 11:15 AM
To: Ryan.Dixon@hawaiicounty.gov; Rebecca Candilasa
Subject: DOH Clean Air Branch Comments on Draft EA for Wai'ōhinu Transfer Station Repairs and Enhancements

Follow Up Flag: Follow up
Flag Status: Flagged

Aloha

Thank you for the opportunity to provide comments on the subject project.
Please see our standard comments at:
https://health.hawaii.gov/cab/files/2019/04/Standard-Comments-Clean-Air-Branch-2019.pdf

Please let me know if you have any questions.

Barry Ching
Clean Air Branch
Hawaii Department of Health
(808) 586-4200

Standard Comments for Land Use Reviews
Clean Air Branch
Hawaii State Department of Health

If your proposed project:

Requires an Air Pollution Control Permit
You must obtain an air pollution control permit from the Clean Air Branch and comply with all applicable conditions and requirements. If you do not know if you need an air pollution control permit, please contact the Permitting Section of the Clean Air Branch.

s
Includes construction or demolition activities that involve asbestos
You must contact the Asbestos Abatement Office in the Indoor and Radiological Health Branch.

Has the potential to generate fugitive dust
You must control the generation of all airborne, visible fugitive dust. Note that construction activities that occur near to existing residences, business, public areas and major thoroughfares exacerbate potential dust concerns. It is recommended that a dust control management plan be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. The plan, which does *not* require Department of Health approval, should help you recognize and minimize potential airborne, visible fugitive dust problems.

Construction activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance complaints.

You should provide reasonable measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:

a) Planning the different phases of construction, focusing on minimizing the amount of airborne, visible fugitive dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
b) Providing an adequate water source at the site prior to start-up of construction activities;
c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
d) Minimizing airborne, visible fugitive dust from shoulders and access roads;
e) Providing reasonable dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Controlling airborne, visible fugitive dust from debris being hauled away from the project site.

If you have questions about fugitive dust, please contact the Enforcement Section of the Clean Air Branch

Clean Air Branch (808) 586-4200 cab@doh.hawaii.gov	Indoor Radiological Health Branch (808) 586-4700

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10530-01
July 2, 2020

Mr. Barry Ching
Clean Air Branch
Department of Health
State of Hawai'i
2827 Waimano Home Road, #130
Pearl City, Hawai'i 96782

Subject: Draft Environmental Assessment
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i
Tax Map Key: (3) 9-5-005:001

Dear Mr. Ching:

Thank you for your email dated May 26, 2020 with comments on the Draft Environmental Assessment (Draft EA) for the Wai'ohinu Transfer Station Repairs and Enhancements published in the Office of Environmental Quality Control's May 8, 2020 issue of *The Environmental Notice*. We offer the following in response to your comments:

An air pollution control permit may be required to operate certain construction equipment, such as crushers or generator sets, which may be used during construction. If required, the contractor will be responsible for obtaining an air pollution control permit from the Clean Air Branch and complying with all applicable conditions and requirements.

Construction or demolition activities for this project are not anticipated to involve asbestos; however, the Asbestos Abatement Office in the Indoor and Radiological Health Branch will be contacted prior to the start of construction should these conditions change.

The discussion on air quality in the Final EA (Section 3.7) has been updated to note that construction activities that occur near to existing residences, business, and public areas and major thoroughfares exacerbate potential dust concerns. Therefore, a dust control management plan will be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. The measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction as recommended in your letter, along with other appropriate measures as determined in the final design phase, will be incorporated into the project plans and specifications. It is also noted that construction activities must comply with the provisions of Hawai'i Administrative Rules, §11-60.1-33 on Fugitive Dust.

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Your letter, along with this response will be reproduced and included in the forthcoming Final EA that will be published in the next issue of the Office of Environmental Quality Control's *The Environmental Notice*. We appreciate your input and participation in this review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

SANDRA L. DEMORUELLE
94-1513 Kaalualu Road
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

June 1, 2020

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honoulu, Hawaii 96826
Attention: Ms. Rebecca Candilasa

Dear Ms. Candilasa,

SUBJECT: Draft Environmental Assessment for Waiohinu Transfer Station Repairs and Enhancements
Naalehu, Hawaii Island
TMK: (3) 9-5-005:001

I am a homeowner and 40 year resident of Naalehu in the historic district of Ka'u.

I am concerned that this Waiohinu Transfer Station DEA does not take seriously the potential harm to the local Hawaiian hoary bats by ANY construction activities during brooding period from June 1 through September 15 every year.

Also, the Hawaiian hawk survey of the forested perimeter for a specified distance must be done not less than 14 days before beginning construction in any month of March is still required under State statutes.

Finally, if DEM does not implement the NFPA Fire Code safety measures listed in Hawaii Fire Department's February 17, 2020, consultation letter, this could produce on-going threat of harm to the endangered bats, as well.

DEM is known for ignoring ESA bat mitigation measures, so the Friends of the Ka'u Bats will be monitoring for DEM compliance with the law.

Sincerely,

Sandra L. Demoruelle

WILSON OKAMOTO CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10530-01
July 2, 2020

Ms. Sandra L. Demoruelle
P.O. Box 588
Nā'ālehu, Hawai'i 96722

Subject: Draft Environmental Assessment
Wai'ohinu Transfer Station Repairs and Enhancements
Na'alehu, Hawai'i Island, Hawai'i
Tax Map Key: (3) 9-5-005:001

Dear Ms. Demoruelle:

Thank you for your letter dated June 1, 2020 with comments on the Draft Environmental Assessment (Draft EA) for the Wai'ohinu Transfer Station Repairs and Enhancements published in the Office of Environmental Quality Control's May 8, 2020 issue of *The Environmental Notice*. We offer the following in response to your comments:

As noted in the Draft EA and restated in the Final EA, the U.S. Fish and Wildlife Service (USFWS) indicated by letter dated February 5, 2020 that the federally endangered Hawaiian hoary bat has the potential to occur in the immediate vicinity of the project area. USFWS notes 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 if trees or shrubs 15 feet or taller are cleared during the pupping season from June 1 through September 15. Additionally, Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

A natural resources assessment report was prepared on March 3, 2020 in support of the Draft EA for the subject project. The assessment included a field survey of extant birds and mammals, as well as potential habitat that may be present in the project area. The survey found that it is possible that Hawaiian hoary bat or *'ōpe'ape'a* (*Lasiurus cinereus semotus*) uses resources within the project vicinity on a seasonal basis. The principal potential impact that improvements to the site might pose to bats is clearing and grubbing of tall vegetation. However, since no trees are present within the project area, displacement of individual bats using a tree as a roosting location would not occur. The fauna discussion in the Final EA (Section 3.5.2) has been updated to include these additional details on the findings of the field survey. The full report which was appended to the Draft EA will also be appended to the Final EA.

Section 3.5.2 has also been updated to indicate that potential impacts from construction activities, such as noise generated during construction, are not likely to adversely affect federally or State-listed threatened or endangered species with implementation of avoidance and minimization measures. These construction activities are temporary in nature and would be similar in character and intensity to existing activities.

We acknowledge that the Hawaiian hawk (*Buteo solitaries*), which was recently removed from the federal list of threatened and endangered species, continues to be State-listed as endangered under HRS Chapter 195D. The impacts and mitigation measures pertaining to the Hawaiian hawk under Section 3.5.2 have been updated to the following:

> To avoid impacts to Hawaiian hawks, construction activities should avoid brush and tree clearing during their breeding season (March through September). If the project area must be cleared during the Hawaiian hawk breeding season, a biologist familiar with the species should conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities. Pre-disturbance surveys for Hawaiian hawk are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, another survey should be conducted. No clearing of vegetation or construction activities should occur within 1,600 feet of any Hawaiian hawk nest during the breeding season until the young have fledged. Regardless of the time of year, no trimming or cutting trees containing a Hawaiian hawk nest is allowed, as nests may be re-used during consecutive breeding seasons.

The proposed project will be required to comply with all applicable provisions of the Hawai'i State Fire Code, National Fire Protection Association 2006 version, with County of Hawai'i amendments as outlined in the pre-assessment consultation letter from the Hawai'i Fire Department dated February 17, 2020. This requirement has been included in the Final EA as part of the impacts and mitigation measures under the police, fire, and medical services discussion (Section 3.12.1). DEM will coordinate with the Hawai'i Fire Department directly regarding these requirements.

Your letter, along with this response will be reproduced and included in the forthcoming Final EA that will be published in the next issue of the Office of Environmental Quality Control's *The Environmental Notice*. We appreciate your input and participation in this review process.

Sincerely,

Rebecca Candilasa
Project Manager

cc: Mr. Ryan Dixon, Department of Environmental Management, County of Hawai'i

Appendix C

Natural Resources Assessment
(AECOS, Inc.)

A natural resources assessment for improvements to the Waiʻōhinu Transfer Station Waiʻōhinu, Kaʻu, Hawaiʻi (TMK 9-5-005:001 por.)

March 3, 2020 *AECOS* No. 1618

Eric B. Guinther, David Miranda, and Reginald David[1]
AECOS Inc.
Kamehameha Highway, Kāneʻohe, Hawaiʻi 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

The Waiʻōhinu Transfer Station in Waiʻōhinu, Kaʻu is slated for improvements to infrastructural elements, including internal access roadways and greenwaste, recycling, reuse, and tipping floor structures (County of Hawaii, undated). The footprint of the proposed enhancements on a portion of TMK: 9-5-005:001 is more or less that of the existing facility off Kaulia Road at the west end of Waiʻōhinu (Figures 1 and 2). *AECOS* Inc. was contracted by Wilson Okamoto Corporation to conduct a natural resources survey of the project site and prepare this report of findings.[2]

The site of the transfer station is heavily disturbed ground comprising unpaved (graveled) roadways, parking areas, various structures for solid waste handling and storage, lawns, and minimal landscaping. A majority of the vegetation is weedy growth within a border of dense grasses and mixed shrubs.

Methods

Botanical Survey

The natural resources survey was undertaken by the botany team on February 18, 2020. A survey area map (corresponding to the Conceptual Site Plan

[1] Rana Biological Consulting, Inc., Kailua-Kona.
[2] This document is produced for inclusion in an EA for the subject Project and will become part of the public record.

provided by the County of Hawaii) was loaded on a Trimble 6000 Series GNSS unit (Trimble GeoXH) for use during the survey. The GNSS unit recorded the progress track of the botanist, providing real time feedback on location and adequacy of coverage during a wandering (pedestrian) transect. Because the survey area matched closely the open areas of the site, our survey looked at all of the open ground and along the site margin as defined by tall vegetation (grass and shrubs mostly). Plant species were identified as they were encountered. Species names follow *Manual of the Flowering Plants of Hawaiʻi* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawaiʻi's Ferns and Fern Allies* (Palmer, 2003) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental plants. More recent name changes for naturalized plant species follow Imada (2012).

Figure 1. Project location on the Island of Hawaiʻi.

Figure 2. Waiʻōhinu Transfer Station location with survey area outlined in red.

Vertebrates Survey

A survey of extant birds and mammals was conducted on the morning of February 27, 2020. One avian point-count station was established within the project area and a single eight-minute avian point-count made. The avian counts were conducted in the morning hours between 0830 and 0930 am with the aid of Leica 8 X 42 binoculars and by listening for vocalizations. Weather conditions were ideal, with unlimited visibility, light winds, and no rainfall. Avian phylogenetic order and nomenclature used in this report follow the AOS Check-List of North and Middle American Birds 2018 and the Sixtieth Supplement to the American Ornithological Society's Check-List of North American Birds (Chesser et al., 2018, 2019).

The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. Mammal scientific

names follow *Mammal species of the world: a taxonomic and geographic reference* (Wilson and Reeder, 2005).

Results

Vegetation

Vegetation across the site consists entirely of ruderal, weedy growth of mostly herbaceous plants. A few shrubs and small trees occur around the perimeter beyond the area of active grounds clearing/maintenance, but this border is mostly tall grass, predominantly Guinea grass (*Megathyrsus maximus*).

Flora

Table 1 is a listing of all the species of flowering plants (angiosperms) observed during the survey with a total of 59 taxa identified from the transfer station area. These are mostly small, ruderal species found in generally low numbers and scattered around structures and lawn areas. Only four are woody shrubs, and two of the four were juveniles of low stature.

Table 1. Plant species observed on the Waiʻōhinu Transfer Station site (TMK: 9-5-005:001 por.).

Species listed by family	Common name	Status	Abundance	Notes
	FERNS			
NEPHROLEPIDACEAE				
Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton	---	Nat	R	
PTERIDACEAE				
Pityrogramma calomelanos {L.) Link	silverback fern	Nat	U	
	FLOWERING PLANTS DICOTYLEDONES			
ASTERACEAE (COMPOSITAE)				
Ageratum conyzoides L.	*maile hohono*	Nat	R	
Bidens pilosa L.	*kī*	Nat	C	
Conyza canadensis (L.) Cronq.	horseweed	Nat	U	
Cyanthillium cinereum (L.) H. Rob.	little ironweed	Nat	R	

Table 1 (continued)

Species listed by family	Common name	Status	Abundance	Notes
ASTERACEAE (cont.)				
Emilia cf. *fosbergii* Nicolson	*pualele*	Nat	R	
Gnaphalium purpureum L.	purple cudweed	Nat	U	
Hypochoeris cf. *glabra* L.	cat's ear	Nat	R	<2>
Montanoa hibiscifolia Benth.	tree daisy	Nat	R	<1>
Pluchia carolinensis (Jacq.) G. Don	sourbush	Nat	R	
Sonchus oleraceus L.	sow thistle	Nat	R	
Senecio madagascariensis Poir.	fireweed	Nat	R	
Synedrella nodiflora (L.) Gaertn.	nodeweed	Nat	O	
indet.		Nat	O	<2>
AMARANTHACEAE				
Amaranthus spinosus L.	spiny amaranth	Nat	R	
BRASSICACEAE				
Cardamine flexuosa With.	bittercress	Nat	R	
Lepidium virginicum L.	---	Nat	U	
BUDDLEIACEAE				
Buddleia asiatica Lour.	dog tail, *huelo ʻilio*	Nat	R	<2>
CUCURBITACEAE				
Cucumus dipsaceus Ehrenb. ex Spach.	teasel gourd	Nat	R	
Momordica charantia L.	wild bitter melon	Nat	O	
CONVOLVULACEAE				
Ipomoea obscura (L.) Ker-Gawl	---	Nat	U	
EUPHORBIACEAE				
Euphorbia hirta L.	garden spurge	Nat	U	
Euphorbia heterophylla L.	*kaliko*	Nat	U	
Phjyllanthus debilis Klein ex Willd.	---	Nat	U	
Ricinus communis L.	castor bean	Nat	C	<1>
FABACEAE				
Chamaecrista nictitans (L.) Moench	partridge pea	Nat	R	
Crotalaria incana L.	fuzzy rattlepod	Nat	R	
Crotalaria micans Link	---	Nat	R	<1>
Hypochoeris cf. *glabra* L.	cat's ear	Nat	R	<2>
Mimosa pudica L.	sensitive plant	Nat	O	

Table 1 (continued)

Species listed by family	Common name	Status	Abundance	Notes
FABACEAE (cont.)				
Neonotonia wightii (Wight & Arnott) Lackey	glycine vine	Nat	A	
Macroptilium atropurpureum (DC.) Urb.	---	Nat	O	
LAMIACEAE				
Hyptis pectinata (L.) Poit.	comb hyptis	Nat	O	
Leonotis nepetifolia (L.) R. Br.	lion's ear	Nat	R	
MALVACEAE				
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	R	
Sida fallax Walp.	*ʻilima*	**Ind**	O	
Sida rhombifolia L.	---	Nat	U	
POLYGALACEAE				
Polygala paniculata L.	bubblegum plant	Nat	R	
POLYGONACEAE				
Polygonum capitatum F. Ham.	---	Nat	R	
SOLANACEAE				
Solanum lycopersicum var. *cerasiforme* (Dunal) Spooner, G. Anderson, & Jansen	wild cherry tomato	Nat	R	
URTICACEAE				
Pilea microphylla (L.) Liebm.	artillery plant	Nat	U	
MONOCOTYLEDONES				
AGAVACEAE				
Agave americana L.	---	Orn	R	
Agave attenuata Salm-Dyck	---	Orn	R	<2>
Cordyline fruticosa (L.) A. Chev.	ti; *kī*	**Pol**	R	
Cordyline fruticosa cult. *ʻcompactaʻ*	ti	Orn	R	
Dracaena fragrans (L.) Ker Gawl. 'Warneckei'	fragrant dracaena	Orn	R	
CANNACEAE				
Canna indica L.	Indian-shot	Nat	R	
CYPERACEAE				
Cyperus polystachyos Rottb.	---	**Ind**	R	
Cyperus rotundus L.	nut grass	Nat	U	
Kylinga brevifolia Rottb.	*kiliʻoʻopu*	Nat	O	

Table 1 (continued)

Species listed by family	Common name	Status	Abundance	Notes
POACEAE				
Axonopus fissifolius (Raddi) Kuhlm.	carpetgrass	Nat	R	
Chloris virgata Sw.	feather fingergass	Nat	C	
Digiteria ciliaris (Retz) Koeler	Henry's crabgrass	Nat	O	
Digiteria violascens Link	violet crabgrass	Nat	R	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	U	
Eragrostis pectinacea (Michx.) Nees	Carolina lovegrass	Nat	C	
Megathyrsus maximus (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat	A	<1>
Melinus repens (Willd.) Zizka	Natal redtop	Nat	U	

Legend to Table 1

STATUS = distributional status for the Hawaiian Islands:
- **Ind** = indigenous; native to Hawaii, but not unique to the Hawaiian Islands.
- Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.
- Orn = A cultivated plant; a species not thought to be naturalized (spreading on its own) in Hawai'i.

ABUNDANCE = occurrence ratings for plant species:
- R – Rare — seen in only one or perhaps two locations.
- U - Uncommon — seen at most in several locations
- O - Occasional — seen with some regularity
- C - Common — observed numerous times during the survey
- A - Abundant — found in large numbers; may be locally dominant.

NOTES:
- <1> – Present or particularly abundant around margin of cleared site.
- <2> – Plant lacking key diagnostic characteristics (flower, fruit); identification, therefore, uncertain.

Aside from a single Polynesian introduction (planted *ti* or *Cordyline fruticosa*) and two indigenous (native) species (*'ilima* or *Sida fallax* and *Cyperus polystachyos*), 56 of the recorded specie are nonnative, naturalized plant species. Both natives are common species.

Birds

A total of 40 individual birds of 9 species, representing 8 separate families, was recorded during the point count (see Table 2). All of the avian species detected are alien to the Hawaiian Islands. Two established, introduced species

—Common Myna (*Acridotheres tristis*) and Spotted Dove (*Streptopeilia chinensis*)—accounted for 50% of the total number of birds recorded. Common Myna was the most commonly tallied species and alone accounted for 35% of all birds recorded during point counts.

Table 2. Avian species detected during a point-count made at the Waiʻōhinu Transfer Station on February 27, 2020.

Common Name	*Scientific Name*	ST	COUNT
	GALLIFORMES		
	PHASIANIDAE - Pheasants & Partridges		
	Phasianinae - Pheasants & Allies		
Red Junglefowl	*Gallus gallus*	A	4
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	6
Zebra Dove	*Geopelia striata*	A	5
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	2
	LEIOTHRICHIDAE - Babblers		
Chinese Hwamei	*Garrulax canorus*	A	2
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	14
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
	Carduelinae - Carduline Finches and Hawaiian Honeycreepers		
House Finch	*Haemorhous mexicanus*	A	3
	PASSERIDAE - Old World Sparrows		
House Sparrow	*Passer domesticus*	A	2
	CARDINALIDAE - Cardinals & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	2

Key to Table 2

ST Status
- A Alien; introduced to the Hawaiian Islands by humans.

COUNT Number of individual birds counted during the point count.

Mammals

Only one terrestrial mammalian species was detected during the course of this survey. Numerous dogs (*Canis familiaris*) were heard barking in areas outside of the survey area.

Discussion

Floral Resources

No plants of conservation concern or enjoying statutory protection (that is, listed as threatened or endangered; HDLNR, 1998; USFWS, nd) were noted in the survey and, given the highly disturbed nature of the site, would not be expected to be growing there.

Faunal Resources

Insects

Several insects are now listed as endangered in the Hawaiian Islands: specifically seven species of the yellow-faced bee (*Hylaeus anthracinus, H. assimulans, H. facilis, H. hilaris, H. kuakea, H. longiceps*, and *H. mana*; USFWS, 2016) and Blackburn's sphinx moth (*Manduca blackburnii*; USFWS, 2000).

No individual yellow-faced bee species was observed during the survey and no potential habitat or food sources were noted. The caterpillar of the sphinx moth feeds exclusively on plants in the Family Solanaceae. In particular, where the moth is found, caterpillars are most often associated with the widely-distributed, non-native tree tobacco plant (*Nicotiana glauca*). The only plant present representing the Family Solanaceae was a single wild cherry tomato plant (*Solanum lycopersicum* var. *cerasiforme*). This species is not known to be used by the caterpillar. We would deem any threat to these species due to project activities as non-existent.

Terrestrial Birds

The findings of the avian survey are consistent with the location of the property, and the habitats present on the site. All nine of the species recorded are common established resident species found in lowland areas of the island of Hawai'i. No species currently listed or proposed for listing as threatened or endangered under federal or state endangered species statutes is associated with the project site (HDLNR, 2015; USFWS, nd).

Seabirds

Although no seabird species was recorded during the course of this survey, it is possible that nocturnally flying seabirds, including the endangered Hawaiian Petrel (*Pterodroma sandwichensis*), Band-rumped Storm-petrel (*Hydrobates castro*), and the threatened Newell's Shearwater (*Puffinus newelli*), overfly the

area. All three species nest in upland mountainous habitat on the Island. The primary cause of mortality in these birds is thought to be predation by alien mammalian species at nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered second most significant as a cause of mortality in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. Disoriented seabirds may collide with man-made structures and, if not killed outright, are dazed or injured birds and easy prey for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al., 1998; Ainley et al., 2001; Hue et al., 2001; Day et al., 2003). No suitable nesting habitat for any seabird species occurs within or close to the project site.

- It is recommended that the all lights installed or set-up as part of the project and its construction be shielded to reduce the potential for interactions of nocturnally flying seabirds with external lights and other man-made structures (Reed et al., 1985; Telfer et al., 1987).

Mammals

The findings of the mammalian survey are consistent with the location of the property and the habitats currently present on the site. Although no rodents were recorded on either survey it is likely that one or more of the four established alien Muridae found on Hawai'i—roof rat (*Rattus rattus*), brown rat (*R. norvegicus*), Polynesian rat (*R. exulans hawaiiensis*), and European house mouse (*Mus musculus*)—use various resources within the general project area on a seasonal basis. It is highly likely that both cat (*Felis catus*) and small Indian mongoose (*Herpestes javanicus*) also use resources within the transfer station as they are both human commensal species. All of these introduced mammals are deleterious to native ecosystems and the native fauna dependent on them.

It is possible that Hawaiian hoary bat or *'ōpe'ape'a* (*Lasiurus cinereus semotus*) uses resources within the Project vicinity on a seasonal basis. The principal potential impact that improvements to the site might pose to bats is clearing and grubbing of tall vegetation. However, since no trees are present in the project site, displacement of individual bats using a tree as a roosting location would not occur.

Other Resources of Potential Concern

Critical Habitat

No federally designated Critical Habitat occurs in the project area; no equivalent statute exists under state law. No natural resources of preservation or conservation concern occur in the project area.

Jurisdictional Waters

No streams or wetlands or other aquatic features are present at the project site.

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Appendix D

Archaeological Literature Review and Field Inspection (Honua Consulting)

Archaeological Literature Review and Field Inspection For Improvements to the Waiʻōhinu Transfer Station, Waiʻōhinu Ahupuaʻa, Kaʻū District, Hawaiʻi Island TMK: [3] 9-5-005:001

Prepared for
Wilson Okamoto Corportation

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Honolulu, Hawaiʻi

March 2020

Management Summary

This Literature Review and Field Inspection (LRFI) was completed at the request of Wilson Okamoto Corporation and was completed to assist with historic preservation efforts associated with improvements to the Waiʻōhinu Transfer Station in Waiʻōhinu Ahupuaʻa, Kaʻū District, on the island of Hawaiʻi, Tax Map Key (TMK): [3] 9-5-005:001. The project area includes approximately 5.23 acres (227,674 square feet [sq. ft] or 21,165 square meters [sq. m]). It is located at the intersection of the Hawaiʻi Belt Road/Māmalahoa Highway and Kaulia Road. The project area is owned by the State of Hawaiʻi and is utilized by the County of Hawaiʻi Department of Public Works.

The proposed project includes minor improvements to the Waiʻōhinu Transfer Station, including installation of two temporary office buildings, an enzyme stabilized roadway, multiple concrete pads for various recycling areas, concrete retaining walls, stairs, signs, a 15,000 gallon water catchment tank, an ADA parking stall, a 6' chain link fence, and a 30' double swing gate. A septic tank with adjacent absorption bed and a sort building chute with a drain and individual wastewater collection system are also proposed. Ground disturbance will be minimal for all proposed activities other than the septic tank, absorption bed, drain line, and wastewater collection system, which will require excavation to approximately 12 feet (3.6 meters) in depth.

The purpose of the literature review and field inspection is to determine the land-use history and identify any potential artifacts or cultural deposits present on the ground surface of the property. This study is not an archaeological inventory survey (AIS), however, this report was written using standards outlined within HAR 13-276 for AIS studies and is intended to assist with historic preservation efforts for the proposed improvements project.

Background research indicates Waiʻōhinu was traditionally a fertile land with permanently flowing streams fed by natural spring sources. During the Māhele in the mid-1800s, Waiʻōhinu was retained as Crown Land by Kamehameha III. Waiʻōhinu was devastated during earthquakes and volcanic activities of 1868, in which historical accounts attest to many structures, including stone walls and thatched houses, being destroyed. Multiple sugar cane plantations operated within and near Waiʻōhinu throughout the mid- to late- 1800s, the last mill closed in 1996. Homestead Lots were plotted throughout Waiʻōhinu, Lots 43-52 are adjacent to the current project area. The project area appears to have remained largely undeveloped to the present time.

A few archaeological studies have been conducted in the vicinity of the project. Archaeological studies focused on a drainage improvement project approximately 1,811 feet (552 meters or 0.34 miles) feet to the northeast of the project, which documented a traditional Hawaiian shrine (SIHP #50-10-76-2600) and multiple historic sites and structures (SIHP #50-10-76-2601 to -2606) associated with early missionary and plantation activities. Another archaeological study was conducted approximately 1,657 feet (505 meters 0.31 miles) feet to the south of the project, which reported that a previous stone feature had existed however it was destroyed by rock removal and only foundation stones remained.

The current field inspection included a 100% pedestrian survey of the property. No cultural features or significant cultural artifacts were observed or documented. Based on the results of background research and the field survey this study finds the project effect determination is “no

historic properties affected". However, no sub-surface archaeological investigations have been conducted on the property to assess the potential for cultural deposits to exist. Therefore, an archaeological monitoring program is recommend to be conducted in accordance with HAR 13-279 (Rules Governing Standards for Archaeological Monitoring Studies and Reports) to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the project.

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Section 1 Introduction

1.1 Project Background

This project was completed at the request of Wilson Okamoto Corporation. Honua Consulting conducted this literature review and field inspection in preparation for improvements to the Waiʻōhinu Transfer Station located in Waiʻōhinu Ahupuaʻa, Kaʻū District on the island of Hawaiʻi, Tax Map Key (TMK): [3] 9-5-005:001. The project area includes approximately 5.23 acres (227,674 square feet [sq. ft] or 21,165 square meters [sq. m]). It is owned by the State of Hawaiʻi and is utilized by the County of Hawaiʻi Department of Public Works. The project area is located at the intersection of the Hawaiʻi Belt Road/Māmalahoa Highway and Kaulia Road. The project area is shown on a U.S. Geological Survey (USGS) map (Figure 1), an aerial (Figure 2), and a TMK (Figure 3).

The proposed project includes minor improvements to the Waiʻōhinu Transfer Station, including installation of two temporary office buildings, an enzyme stabilized roadway, multiple concrete pads for various recycling areas, concrete retaining walls, stairs, signs, a 15,000 gallon water catchment tank, an ADA parking stall, a 6' chain link fence, and a 30' double swing gate. A septic tank with adjacent absorption bed and a sort building chute with a drain and individual wastewater collection system are also proposed. Ground disturbance will be minimal for all proposed activities other than the septic tank, absorption bed, drain line, and wastewater collection system, which will require excavation to approximately 12 feet (3.6 meters). A preliminary site plan is presented as Figure 4.

The purpose of the literature review and field inspection was to determine the land-use history of the property area and to identify any potential artifacts, architecture, or cultural deposits present on the ground surface of the property. Fieldwork for this project was performed under the archaeological permit number 20-15 issued to Honua Consulting by the State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR) in accordance with Hawaiʻi Administrative Rules (HAR) Chapter 13-282. This study is not an archaeological inventory survey (AIS), however, this report was written using standards outlined within HAR 13-276 for AIS studies and is intended to assist with historic preservation efforts for the proposed project.

1.2 Environmental Setting

1.2.1 Natural Environment

The project area is located on the island of Hawaiʻi, which is formed of five volcanoes, Mauna Kea (“white mountain”), Mauna Loa (“long mountain”), Hualālai, Kīlauea (“spewing”), and Kohala. The project area is situated within the district or moku of Kaʻū, the largest district of Hawaiʻi Island and encompassing over a quarter of the island. Kaʻū includes the southeast portion of Hawaiʻi and consists of an array of geological zones, including Hawaiʻi Volcanoes National Park containing Mauna Loa and Kīlauea volcanoes to the north. Moving southward is the Kaʻū Forest, the Kaʻū Desert containing hot barren lava plains, Punaluʻu black sand beach, Papakōlea green sand beach, wind-swept plains and cliffs of Ka Lae (“the point”) at the southern tip of the island, and forest lands of Manukā State Park to the west.

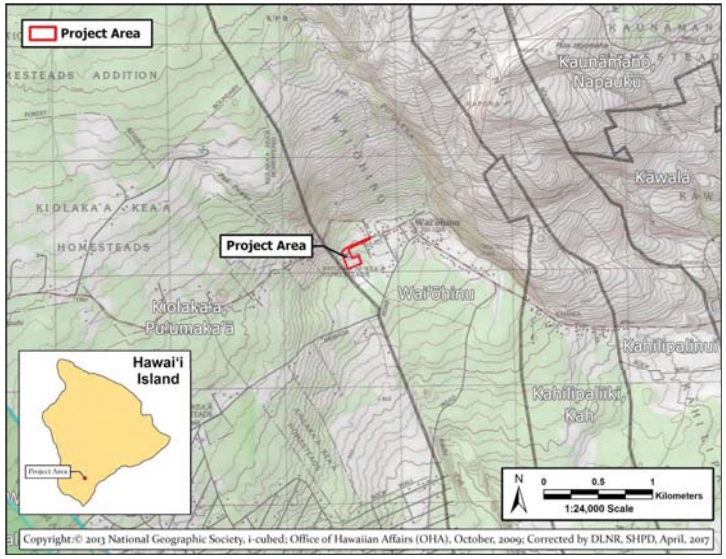

Figure 1. Portion of a 1998 U.S. Geological Survey (USGS) Topographic Quadrangle Map Showing the Project Area

Figure 2. Aerial Photo Showing the Location of the Project Area (2011 Orthoimage)

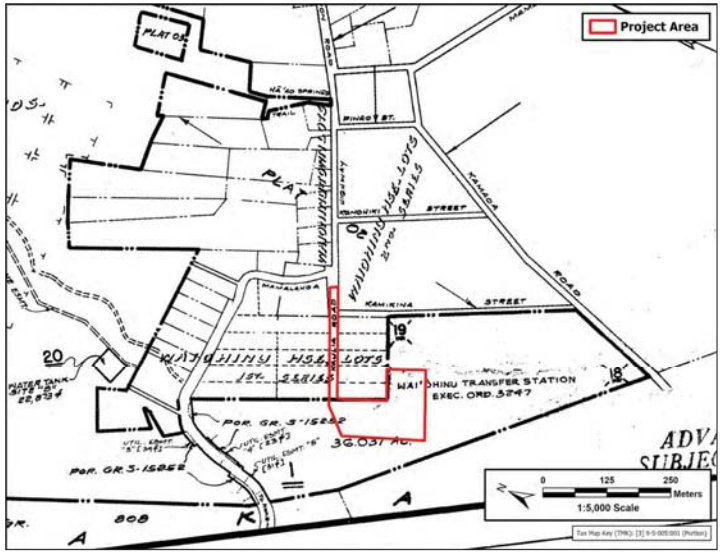

Figure 3. Tax Map Key (TMK): [3] 9-5-005 Showing the Project Area

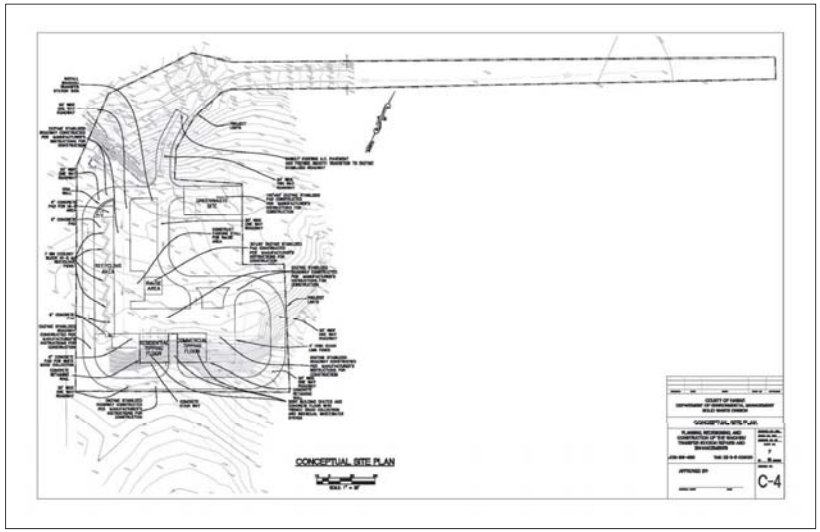

Figure 4. Site Plan for the Waiohinu Transfer Station Improvements Project (provided by client)

Mauna Loa ("long mountain") is the second tallest point in Hawai'i at 13,677 feet (4,169 meters) and is one of the two active volcanoes on the island, with Kīlauea being the other. Ancient inland valleys are carved into the southern slopes of Mauna Loa and Kīlauea. The valleys have been partially filled by lava flows which flow downslope creating fan-shaped lowlands and coastal areas. Weathering and soil formation in Ka'ū is slow and insignificant as thick ash deposits and old lava beds are exposed for relatively short periods before being buried by fresh flows (Stearns and Clark 1930). Due to the displacement of streams by the frequent lava flows it is noted that "there is no stream in the Kau District that flows in a channel of its own making over 10 feet deep" (Stearns and Clark 1930:52).

The ahupua'a (traditional land division) of Wai'ōhinu includes a relatively narrow strip of land spanning from the coastline to approximately 8,458 ft (2,577 m). Wai'ōhinu Ahupua'a encompasses roughly 1.4 square miles (3.6 square kilometers [km]). The climate in the vicinity of Wai'ōhinu is warm and semi-tropical in lowland areas and cooler in areas of higher elevation. The vicinity of the project area receives a mean annual rainfall of approximately 1182.5 millimeters (mm) (46.5 inches), with the majority of rainfall expected between November to March (Frazier et al. 2016). The Wai'ōhinu Stream, a non-perennial stream fed by spring sources, formerly ran through the village but has since been historically diverted. The current project area is approximately 0.5 miles (0.8 km) to the west of Wai'ōhinu Stream. The closest volcano to the project area, Mauna Loa, is approximately 28 miles (45 km) to the north/northeast. The nearest coastline to the project is Honu'apo Bay, approximately 4 miles (6.45 km) to the east.

The expected soil within the project area consists entirely of Keaa Cobbly Medial Loam, 2-10% slopes (Figure 5). This soil series consists of shallow, well-drained soils found in mid-elevations (305-1,067 m or 1,000-3,500 ft) on windward slopes and the southwest rift zone of Mauna Loa Volcano (NCSS 2008). The soil is formed in basic volcanic ash over pahoehoe lava found on only a small extent of Ka'ū near Wai'ōhinu Village. The soil type generally consists of approximately 25-50 centimeters (cm) (10-20 inches) of soil over basalt bedrock with approximately 35-60% gravel to cobble rock fragments (NCSS 2008). Keaa soils are well-drained, runoff is high to very high, and permeability is moderately rapid in soil and very slow in underlying bedrock. The soil is typically used for wildlife habitat and homesites, some areas are used for orchid crops. Natural vegetation on this soil type includes christmasberry (*Schinus terebinthifolius*) and guineagrass (*Urochloa maxima*) (NCSS 2008).

1.2.2 Built Environment

The project area is located on the west edge of the village, at the intersection of Hawai'i Belt Road/Māmalahoa Highway and Kaulia Road. The Hawai'i Belt Road is the main highway extending throughout the island and is regularly traveled. The northeast portion of the current project area includes nearly the full extent of Kaulia Road. Kaulia Rd services the Wai'ōhinu Transfer Station as well as provides access to a residential street, Kamikina St. Wai'ōhinu Homestead Lots abut Kaulia Rd, however there are only a few that currently contain residences.

The northern portion of the project area is paved with asphalt. Large basalt boulders line the south side of Kaulia Rd as well as other areas throughout the transfer station area. The transfer station includes multiple recycling bins, some on concrete pads, concrete curbing, and guardrails. There are likely some minimal sub-surface utilities present in the northern portion of the property. The southern portion generally includes low-cut grasses.

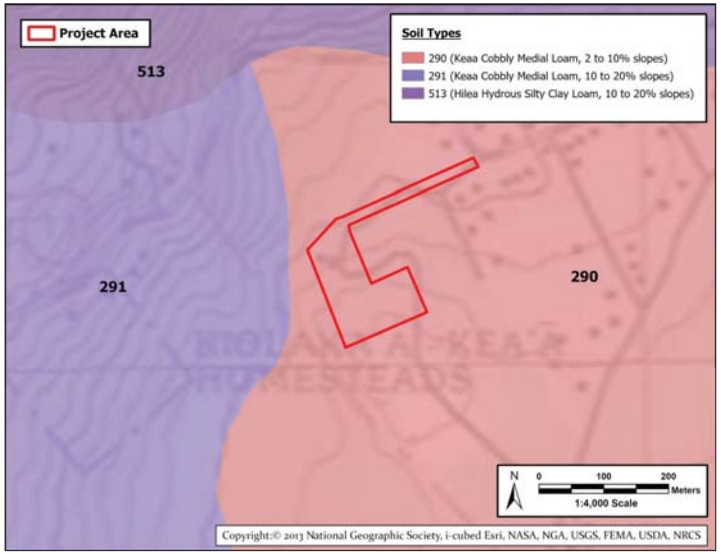

Figure 5. Portion of a 1998 USGS Topographic Map with Soil Series Overlay Showing Anticipated Soils Within the Project Area

Section 2 Traditional and Historical Background

Background research for the literature review was conducted using materials obtained from the State Historic Preservation Division (SHPD) library in Kapolei, University of Hawai‘i at Mānoa Hamilton Library, and the Honua Consulting, LLC. report library. On-line materials consulted included the Ulukau Electronic Hawaiian Database (www.ulukau.com, Soehren 2002-2010), Papakilo Database (www.papakilodatabase.com), the Hawai‘i State Public Library on-line (http://www.librarieshawaii.org/ Serials/databases.html), and Waihona ‘Aina Mahele database (http://www.waihona.com). Hawaiian terms and place names were translated using the on-line Hawaiian Dictionary (Nā Puke Wehewehe ‘Ōlelo Hawai‘i) (www.wehewehe.com) and Place Names of Hawaii (Pukui et al. 1974). Historic maps were obtained from the State Archives, State of Hawai‘i Land Survey Division website (http://ags.hawaii.gov/survey/map-search/), UH-Mānoa Maps, Aerial Photographs, and GIS (MAGIS) website (http://guides.library.manoa.hawaii.edu/magis). Maps were geo-referenced for this report using ArcGIS Pro desktop. GIS is not 100% precise and historic maps were created with inherent flaws; therefore, geo-referenced maps should be understood to have some built-in inaccuracy.

2.1 Traditional Background, Place Names, and Mo‘olelo

2.1.1 Mo‘olelo

Mo‘olelo (stories, myths, legends) of Ka‘ū are closely tied with the volcanic terrain and thus the volcanic goddess Pele and her clan. Pele made her home in the depths of the craters on the slopes of Mauna Loa (Handy and Pukui 1958). God Ku of the forest and uplands, patron of canoe builders was also addressed in chants of the area. God Kane of sunlight and fresh water in rain or streams and God Kanaloa, lord of the ocean and ocean winds, were also very important.

Mo‘olelo of Wai‘ōhinu tell of how the village got its name.

> A *kupua*, a spirit came from Kahiki and lived below the Ha‘ao springs. He married a Ka‘u woman, and had a son named Kupa. They killed many people, and hid their bodies among tall weeds by the springs. A cloudburst would bring grease from the corpses into the stream of Wai-o-hinu. With a ruse the people caught the boy and his father in a net and burned them in an imu. Some people credit this story for the name Waiohinu or “water shining like oil” (Ako 2005:50)

Multiple traditional place names presented in this report are listed and described in Table 1.

2.1.2 Setting

A welcoming chant provided in the forward of *The Polynesian Family System in Ka‘u, Hawai‘i* by Handy and Pukui (1958) proceeds:

Come!
You are welcome, O lehua blossom of mine form the upland forest,
A blossom around which the birds gather,
My lehua that bloomed in the Ha‘ao rain.
Light comes to our house, for you are here.
Come! Come, we are here!

Table 1. Table Listing Traditional Place Names Referenced in this Report

Place Name	Translation	Location	Reference
Hā‘ao		Spring, land section, and church in Wai‘ōhinu, named for a Ka‘ū rain and a supernatural girl	Pukui et al. 1974:34
Hīlea	careless	Village, gulch, and land division	Pukui et al. 1974:45
Honu‘apo	Caught turtle	Land section, quadrangle, village, bay; Ka‘ū, Hawai‘i	Pukui et al. 1974:51
Ho‘ōpūloa	Put in together	Land section, bay, village; Kona, southwest Hawai‘i Island; site of lava flow in 1926	Pukui et al. 1974:52
Ka‘alu‘alu	The wrinkle	Bay and point east of Ka Lae	Pukui et al. 1974:60
Ka‘ū		District, desert, elementary and high school, trail, and peak (2, 082 ft high), Hawai‘i Island	Pukui et al. 1974:91
Kahuku	The projection	Land section, ranch; Ka‘ū, Hawai‘i; Kahuku Pali is a fault scarp 2.5 miles NW of South Point with max height of 66 ft, extends inland 10 miles, and out to sea for 18 miles	Pukui et al. 1974:66
Ka Lae	The point	South Point, Hawai‘i, the southernmost point in all fifty states	Pukui et al. 1974:71

Place Name	Translation	Location	Reference
Kīlauea	Spewing, much spreading	Active volcano on the flank of Mauna Loa, nearly continuously active 1823-1894 and 1907-1924, eruptions began again in 1952 and still continue	Pukui et al. 1974:111
Kiolakaʻa	Throw roll	Land sections and homesteads, Honuʻapo and Ka Lae	Pukui et al. 1974:112
Nāʻālehu	The volcanic ashes	Land section, village, elementary school	Pukui et al. 1974:160
Nāʻōhuleʻelua	The two bald heads	Land section, ancient surfing area	Pukui et al. 1974:163
Pāhala	Cultivation by burning mulch	Quadrangle and town, southwest Hawaiʻi	Pukui et al. 1974:174
Punaluʻu	Spring or coral dived for	Land section and gulches, harbor, landing, black sand beach and beach park, ancient surfing area	Pukui et al. 1974:194
Waiʻōhinu	Shiny water	Village and land division, Hawaiʻi Island	Pukui et al. 1974:226

Waiʻōhinu was a favored location within Kaʻū Ahupuaʻa by Hawaiian aliʻi (royalty). An upland forest of ʻōhiʻa lehua (*Metrosideros* sp.), a permanent stream watered from Hāʻao Springs, moderate rainfall, and a sheltered valley created a comfortable environment with fertile soils. Handy and Pukui (1958:21), describe Waiʻōhinu:

> Quite distinct from the rest of Ka-ʻū is the valley of Waiʻōhinu, which is flanked in such a way by the mountainside that it escapes the violence (and evaporation power) of both trade and southernly winds, while receiving a generous share of rainfall. This was the locality chosen by the chiefs (aliʻi) for their residence.

Little else is known of aliʻi use of the ahupuaʻa.

The physical environment of Waiʻōhinu and fertile lands are mentioned in several historic sources. Handy and Pukui (1958) relate:

> Most prized were the many springs that flowed from above Waiʻōhinu. They are still known today as Punawai-o-Haʻao. There were a total of 5 separate springs, but three of them were close together, feeding the stream that flowed through

> Waiohinu. The three springs were called Wai-a-ka-ʻilio, Haʻao, and the last one was called Wai-a-kahoaliʻi. The forth, named Mauʻoliʻoli was a distance east of the 3 main springs. Kapuna was the fifth spring located several hundred miles east of the others. It emptied into a small gulch and eventually joined the stream. Haʻao was the only stream along the whole southeast and southwest coast of Hawaii. These 5 springs provided the water that flooded the wet-taro area of Waiʻōhinu and had a very special place in the lore of the god Kane who is often associated with water. (Handy 1958, quoted in Ako 2005:49-50)
>
> The name Waiʻōhinu may have also come from the name of the female of two *kupua*, which were stones from Kahiki. There was a male black stone called Kaʻuloa, and a female stone, called Waiʻōhinu. This latter stone was red. They stood in a kukui grove. Each day they would sink further into the ground and as time passed, they were no longer visible. The name of the male stone Kaʻuloa was said to have been the inspiration for Kaʻū, the name of the district (Handy 1958, quoted in Ako 2005:50)

In 1819, the missionary William Ellis described agricultural lands cultivated around Waiʻōhinu.

> Our path running in a northerly direction, seemed leading us towards a ridge of high mountains, but it suddenly turned to the east, and presented to our view a most enchanting valley, clothed with verdure, and ornamented with clumps of kukui and kou trees. On the south-east it was open towards the sea, and on both sides adorned with gardens, and interspersed with cottages, even to the summits of the hills.
>
> A fine stream of fresh water, the first we had seen on the island, ran along the centre of the valley, while several smaller ones issued from the rocks on the opposite side, and watered the plantations below. We drank a most grateful draught from the principal stream, and then continued our way along its margin, through Kiolaakaa, traveling towards the sea, till we reached Waiohinu, about ten miles from the place where we slept last night. Here we found a very comfortable house belonging to Pai, the head man, who invited us in, and kindly entertained us. About noon, a hospitable dinner was prepared, of which, with the additional luxury of fresh water, we made a comfortable meal.
>
> Between three and four o'clock we took leave of them, and pursued our journey towards the sea-shore. Our road, for a considerable distance, lay through the cultivated parts of this beautiful valley: the mountain taro, bordered by sugar-cane and bananas, was planted in fields six or eight acres in extent, on the sides of the hills, and seemed to thrive luxuriantly. On leaving the valley, we proceeded along by the foot of the mountains, in a line parallel with the sea, and about a mile and a half from it. The country appeared more thickly inhabited, than that over which we had travelled in the morning. (Ellis, 1963:133-134, quoted in Handy and Pukui 1958:22)

A description by Mark Twain in 1866 also described fertile agricultural lands around the village. Mark Twain described his visit to Waiʻōhinu in a letter published in the *Sacramento Daily Union* on October 25, 1866:

> All day the next day we fought that treacherous point – always in sight of it but never able to get around it. At night we tacked out forty or fifty miles, and the following day at noon we made it and came in and anchored.
>
> We went ashore in the first boat and landed in the midst of a black, rough, lava solitude, and got horses and started to Waiohinu, six miles distant. The road was good, and our surroundings fast improved. We were soon among green groves and flowers and occasional plains of grass. There are a dozen houses at Waiohinu, and they have got sound roofs, which is well, because the place is tolerably high upon the mountain side and it rains there pretty much all the time. The name means "sparkling water," and refers to a beautiful mountain stream there, but they ought to divide up and let it refer to the rain also.
>
> A sugar plantation has been started at Waiohinu, and 150 acres planted, a year ago, but the altitude ranges from 1,800 to 2,500 feet above sea level, and it is thought it will take an other year for the cane to mature.
>
> We had an abundance of mangoes, papaias and bananas here, but the pride of the islands, the most delicious fruit known to men, cherimoya, was not in season. It has a soft pulp, like a pawpaw, and is eaten with a spoon. The papaia looks like a small squash, and tastes like a pawpaw.
>
> In this rainy spot trees and flowers flourish luxuriantly, and three of those trees – two mangoes and an orange – will live in my memory as the greenest, freshest and most beautiful I ever saw – and withal, the stateliest and most graceful. One of those mangoes stood in the middle of a large grassy yard, lord of the domain and incorruptible sentinel against the sunshine. When one passed within the compass of its broad arms and its impenetrable foliage he was safe from the pitiless glare of the sun – the protecting shade fell everywhere like a somber darkness.

Fertile agricultural lands were retained through the nineteenth and twentieth centuries. It is stated that:

> In his youth, William Meinecke remembers standing on the road near Kauaha'ao church looking mauka up the valley and viewing the Hawaiian gardens that stretched from the pali on the right all the way to where the road to Kona goes around the foothills on the left. The plantings stretched uphill, even above Ha'ao Springs, and grass houses stood here and there among the gardens. Each garden was small but there were many of them. Taro was the most frequently planted food crop. Bananas, *pia* (starch), *olena*, sweet potatoes, pumpkins, mellons and sugar cane grew here and there around the taro gardens (personal conversation, Kelly and Crozier 1974:2).

An 1876 map of Wai'ōhinu (Registered Map [RM] 527) notes thick upland forests of 'ohia followed by scatterings of 'ohia cascading down the mountain slope and then the current project area located between two government roads, which are now the Hawaii Belt Road to the north and Kamaoa Rd to the south (Figure 6). It also shows Hutchinsons Sugar Mill to the southeast. An 1885 Hawai'i Government Survey map of Ka'ū (RM 1409) shows very little development throughout Wai'ōhinu Ahupua'a (Figure 7).

In the late 18th century, the island of Hawai'i became a battle ground by ali'i (royalty) who sought control. The last chief of Ka'ū, Keoua Ku'ahu'ula, and his warriors held their grounds and were known to be fierce in battle. Following a large eruption of the Kilauea volcano, a meeting of truce with Kamehameha was achieved. However, Keoua was killed and Kamehameha was able to continue his battles and become king of the Hawaiian archipelago.

2.2 Mid-1800s, The Great Māhele

In the 1840s, private property was introduced into Hawaiian society through formation of the Board of Commissioners to Quiet Land Titles and the adoption of the Great Māhele (the division of Hawaiian lands). In 1845 King Kamehameha III waived his right to full authority over the land, portioning out land for his personal use (crown lands) and then dividing the rest of his territory into land for the government, land for the ali'i (chiefs) and konohiki (land overseers), and land for tenants or commoners (kuleana land) (Alexander 1891, Board of Commissioners 1929, Moffat and Fitzpatrick 1995). Following thereafter, Land Commission Awards (LCAs) were awarded to commoners as kuleana parcels for fee ownership. Kuleana land claims required proof of residency on the land and continued land improvements. LCAs therefore record who resided on the land and how the land was used. Royal Patents were often granted on LCAs awarded from 1847-1853, which finalized the sale and legal title of the lands. Royal Patents (RP) were used until the overthrow of the Hawaiian government in 1892 and thereafter are referred to as Land Patents. Starting around 1846 Land Grants (LG) were established which made it possible to purchase property outright rather than going through the land commission process. Due to this process, Land Grant documentation unfortunately does not commonly specify how the land had been utilized prior to its purchase.

The ahupua'a of Wai'ōhinu was retained as crown land by Kamehameha III. A total of 41 commoners were also awarded LCAs within and near the village (Kelly and Crozier 1974a and b). Figure 8 and Figure 9 show LCAs and LG near the project area. The only other land transfer within Wai'ōhinu was to the American Board of Christian Foreign Missions (ABCFM) for the creation of a mission station in 1841 and subsequent LCAs 387-1 and -2.

One LCA and one LG are adjacent to the northeast portion of the project area. LCAs and LG near the current project area are described in Table 2. LCA 8121 awarded to a claimant named Honolulu, describes 3 'āpana (land parcel) within Wai'ōhinu, the one adjacent to the current project area appears to be 'āpana 3. The LCA describes 24 lo'i (irrigated terrace), wauke (paper mulberry, *Broussonetia papyrifera*), a pigpen, coastal land, and two house lots. No information was found pertaining to LG 6446.

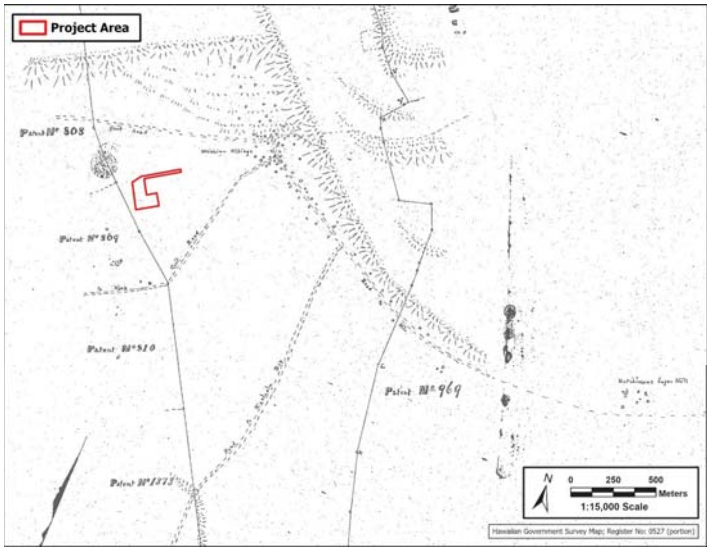

Figure 6. Portion of an 1876 map of Waiʻōhinu showing the project area; notice the placement of the project area between two government roads and the location of the Waiohinu Sugar Mill to the east (RM 527)

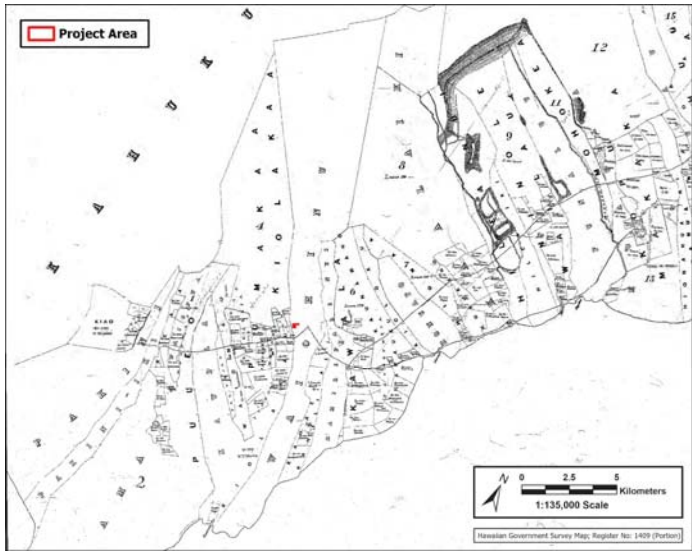

Figure 7. Portion of an 1885 Hawaiʻi Government Survey map of Kaʻū showing Waiʻōhinu Ahupuaʻa and the location of the project area (RM 1409)

Table 2. Table Listing Māhele Data Near the Project Area

Land Commission Award (LCA), Land Grant (LG), Royal Patent (RP)	Awardee	Location	Acreage	Contents
LG 808	Kaulia	Kiolakaa	50.6	Dated 1852
LG 809	Haupu	Kiolakaa	18.6	Dated 1852
LG 810	H. Kinney	Kiolakaa	51.33	Dated 1852
LG 6446				
LCA 8121, RP 7020	Honolulu	Adjacent to northeast portion of PA	7.38 acres (3 ʻāpana)	24 loʻi, wauke, pigpen, coastal land, two house lots

2.3 Late 1800s through The Present Time Period

In the 1800s, Waiʻōhinu was the main village in Kaʻū District. The nearest port for small vessels was in Kaʻaluʻalu which joined the village by a cart road built in 1852 (Elwell and Elwell 2005). A description of the built environment Waiʻōhinu in the mid-1800s is provided by Rev. Henry Kinney of the Mission Station.

> Cattle, horses and goats are becoming numerous; the latter affords them the principle article of export-- hundreds of goats salted and dried might be exported monthly, if a vessel would come for them at a set time.
>
> We see nothing but a bad report of the safety of our harbours, to prevent them from coming and doing a fair business. Now all the produce must be carried to Hilo on the backs of men or animals——...for a few months past, the people have been unusually active in planting tab, potatoes and onions, having been encouraged that vessels will come bye and bye for their produce.
>
> There has been considerable improvement in roads, in the past two years——they have worked nearly the whole extent of the district——This year the people have made a horse road to the borders of Kona, over the far famed lava district, never forgotten by those who have once travelled over it——We have an excellent horse road near the station...
>
> Besides improving the old roads through the district, a new cart road is nearly completed from Kaalualu Bay to the tillable lands over 7 miles distant. The route being near the station, it will be a great advantage to it. Many of the people are making efforts to buy land, some have already received their deeds. It is to be hoped that the purchase of land, and the greater facility of taking products to market, will in a measure stem the tide of emigration which threatens to depopulate some portion

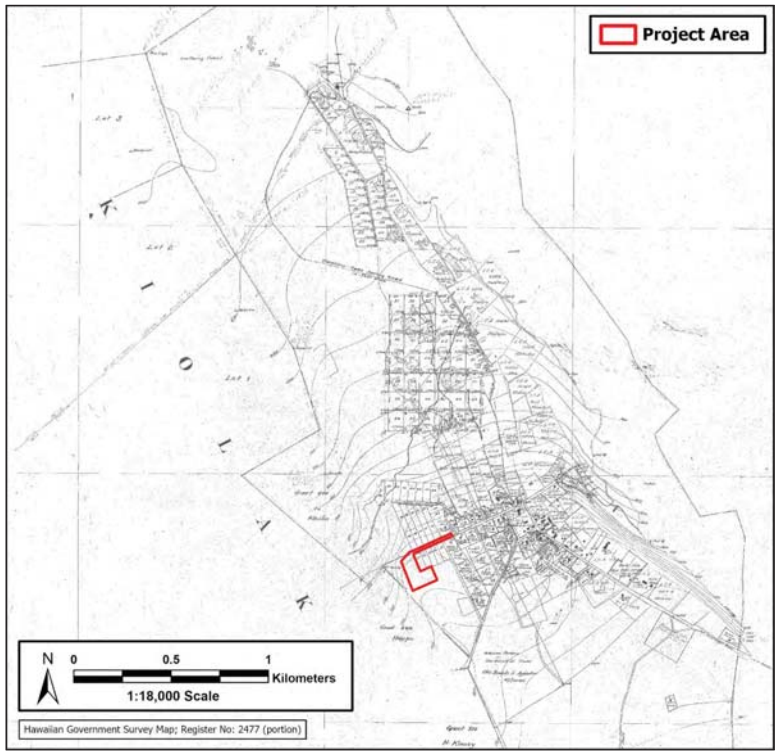

Figure 8. A 1942 map of Waiʻōhinu showing the location of the project area as well as LCAs and Waiʻōhinu House Lots; also notice the springs shown in the uplands

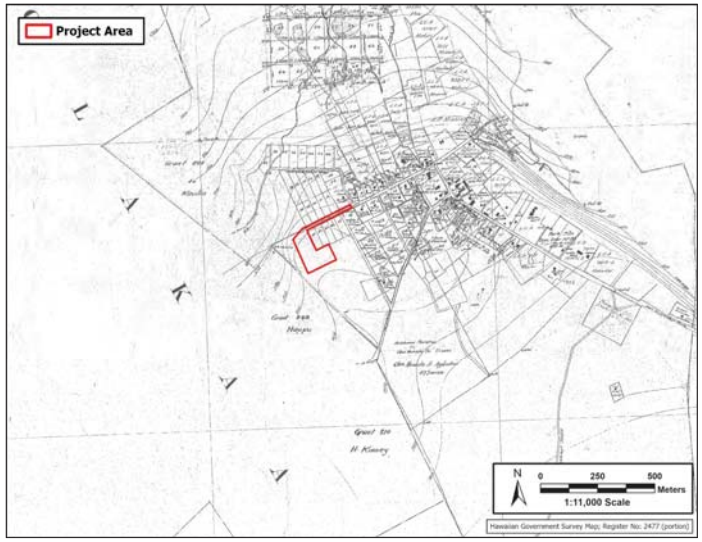

Figure 9. Close-up of the 1942 map of Waiʻōhinu showing the location of the project area as well as LCAs and Waiʻōhinu House Lots

> of the field. A well desposed and enterprising foreigner is very much needed to aid and encourage the people in agricultural pursuits [1852:3]. (quoted in Kelly and Crozier 1974:6-7)

In 1857, an Agricultural Society was formed and agricultural pursuits in Waiʻōhinu were improved.

> farming has actually commenced in Kau during the past year. Within this time the first plow has been brought in and the first ground ploughed. Corn, beans, wheat etc. has been planted and the trial is being made. Two years ago there was not, nor even had been a cart in Kau, now there are three o carts and all in use. Ox yokes, bows, chains, and other farming utencils have been brought in and are used [Station Report 1857:5, quoted in Kelly and Crozier 1974:7)

Waiʻōhinu is famous for its association with Mark Twain, who visited the village in June of 1866 and planted a monkey pod tree (*saman* sp.). The tree fell in 1957 during a wind storm, however, a sprout from the tree was replanted and continues to grow.

2.3.1 Volcanic Activity

In 1868, Waiʻōhinu experienced a series of seismic activities. The worst came on April 2, 1868 when a severe earthquake shook the Waiʻōhinu Fault which runs approximately half a miles from the village of Waiʻōhinu southeast to Waikapuna Bay (Stearns and Clark 1930:93). The quake is said to have destroyed every building in Waiʻōhinu and caused widespread destruction throughout Kaʻū.

The eruption is documented by a Catholic priest, Rev. Celestine Ruault. He describes the days leading up to the great eruption and the day itself. A local shows him strands of Pele's Hair or strands of dried molten lava which were typical only within a few miles of the Kilauea caldera but were now raining down some 30 miles from the crater summit.

> While chatting here and there with my people, who had gathered on their different stoops and verandas, I was *nolens volens,* overtaken by a most violent earthquake. It was so violent that my mule, unaccustomed to such rough handling, wanted to lie down, with me on her back. I saw our natives' houses rocking like ships…Yet this was only the beginning of the evil. The people were hardly over their first fright when a dense cloud of black smoke arose toward the sea…the violent quake had shaken down a big hill…There came a second and even a third stroke…It seemed there was an immense hole underneath the crust of the earth in which every now and then there was a furious surging of what seemed to be liquid fire. Much could be heard and terror only increased by putting one's ear to the ground…I am not exaggerating when I say that we felt more than fifteen hundred of Madam Pele's heavy thumps. People in our neighboring district -Kona- felt some of our shocks, but we of Kau were in for it…Every stone wall in Kau was down; frame and thatched houses were demolished; crockery and glassware were all in atoms. Men and animals lay smitten on the ground…there came a terrific shock, which for violence and impetuosity must be considered No. 1. All other shocks were mere trifles compared to this one. For once I could not stay in my house; hurrying outside, I found that I could not stand; I was fast getting into my second childhood. I

therefore tried my baby tricks and endeavored to crawl on all fours. Even then I would hardly succeed.

While in this position, and holding on tight to old mother earth, I saw my dear chapel giving way to the impetuous wrenchings of the earthquake. Happily for all those concerned this shock was cut short, or we could not have lived.

After this came a great calm which seemed but to add to our horror in this already too sinister situation. No noise of any kind, no wind, no sign of life, no action was noticeable. Turning toward the mountain I saw numberless columns of smoke rushing out of ever so many crevices in the mountain-side…news arrived that a tidal wave had wiped Honuapo from the face of the earth, killing many. I hastly saddled my mule and got en route for Honuapo…On the way I passed Waiohinu; there I saw the Protestant church in ruins…I saw a lurid light reflected in the clouds. That was the start of an eruption of our volcano…In order to reach my destination I had to pass Waiohinu. I found that village completely deserted, not a living soul, not even a dog or cat could be met with. All had camped out on a neighboring hill. (Ruault 1909:96-109)

2.3.2 Missionaries in Kaʻū

In the early 1840s, Catholic and Protestant missionaries landed in Kaʻū. Father Joachim Mareschal, a Catholic priest, visited the village of Hoʻopuloa and settled in Hīlea by 1842 (Elwell and Elwell 2015). He was replaced by Father Agathange Grould who soon built a church in Naʻohuleʻelua. The Catholic missionaries belonged to the Sacred Heart Fathers of France and Belgium and their group included Father Damien de Veuster (Father Damien of Molokaʻi). The men traveled through the Kaʻū District on horseback.

In 1841, Reverend John D. Paris, a Protestant missionary, built a church in Waiʻōhinu. Paris was followed by the second resident Protestant missionary, Rev. Henry Kinney.

A Mission Station was erected in Waiʻōhinu and the American Board of Christian Foreign Missions (ABCFM) was given the deeds to two lots (LCA 387-1 and 387-2) (Kelly and Crozier 1974). There were difficulties with transporting building materials and supplies into the inland village of Waiʻōhinu . Reverend Paris described how materials for the church were gathered:

It was of stone laid up in mortar and was 85 feet long by 48 in. width and 15 feet high. The lava stone was carried voluntarily from seven old heiaus or heathen temples. The sand and lime was carried from three to six miles by native men, women, and children. The men had to dive for the coral stone for lime, in water from two to six fathoms deep. The coral was laid on the sea shore to dry, then brought up to Waiohinu, and after carrying wood from the forest, the coral was burned. All the heavy timbers were dragged from the mountain forests by natives, a distance of five to ten miles. Sometimes fifty or a hundred natives, men, women and children, pulled with ropes on one stick. The boards and lighter materials were carried a distance of from fifteen or twenty miles. Everything was collected voluntarily... (Paris, 1926:23, quoted in Kelly and Crozier 1974:6)

The Cristian, Kauahaʻao Church, was organized and built on the east side of the village in 1841 as the Kauahaʻao Congregational Church. The founders felt it was an appropriate name because they saw the procession pattern of the Hāʻao rain as being similar to that of the people (Kauahaʻao Congregational Church 1991). The first church was a grass house built on a stone enclosure about 110 feet long by 40 feet wide and four feet high. A second church of stone was erected through 1843 and 1844, however, it was leveled to the ground during the earthquake of 1868. A third church was built in the same location, but burned down in 1877. In 1890, the fourth church was constructed with assistance by many Chinese community residents. The church was demolished in 1998 due to a severe termite infestation.

2.3.3 Commercial Industries near Waiʻōhinu

2.3.3.1 Pulu

From 1859 to 1885, pulu fiber from the Hawaiian tree fern (hāpuʻu, *Cibotium* sp.) was gathered and sold to American traders (Handy and Pukui 1958, Kelly and Crozier 1974). The pulu was typically shipped to California and used to fill pillows and mattresses. Rev. C. Shipman described in Mission papers the effect that the change in agricultural pursuits had on the local population.

…not a source from which they might secure comfort to them selves and families, but the actual result is the reverse. They are offered goods to almost any amount, to be paid for in pulu; this to a native is a strong temptation to go into debt. Consequently many of them are deeply in debt and almost all to some extent. The policy of the traders is to get them in debt and to keep them there so long as possible. By this means they are induced to purchase many things entirely useless to them as a means of comfort and blessing to their families, they also purchase much which might easily be dispensed with. When once in this condition they are almost entirely under the control of their creditors, and are compelled to live in the pulu regions, at the peril of losing their houses and lots, and whatever, other property they may possess. Thus their homes are almost in reality deserted, grounds uncultivated [Station Report, 1860:4].

When my last report [1859] was written I could report but one foreigner in the district. Now there are more than twenty. Their influence is such as is usual from that class of people in other places. There are but three of the whole number who attend church, although the most of them are familiar with the native language. Ten months since, there was not a retail store in the District, now there are seven and a good amount of trade; one store on an average sells over $1000 worth of goods per month [1860:5, quoted in Kelly and Crozier 1974:8].

2.3.3.2 Sugar Plantations

Through the mid-1800s to early 1900s, commercial sugarcane cultivation dominated the Kaʻū landscape. The need for an increase in field workers let to an influx of contracted laborers from around the world, including China, Portugal, Japan, Korea, and the Philippines. In 1850, Native Hawaiians accounted for 97 percent of the population, but only 33 percent by 1899 (Elwell and Elwell 2015). A census for Kaʻū taken in 1884 reported 1,543 Hawaiians and part Hawaiians, 568 Chinese, 933 Portuguese, and 116 haoles (white person) (Char and Char n.d.).

Several sugar plantations dominated the landscape within and surrounding Waiʻōhinu. The first mill was built in Waiʻōhinu by Nicholas George by 1866 (Kelly and Crozier 1974a and b, Elwell and Elwell 2015). A unique feature of the mill was the placement of the flue and smoke stack against the adjacent hillside.

> In the days when the mill was built there were frequent earthquakes of great intensity. This made venting the firebox a problem since a conventional smokestack would have been toppled by the first sharp quake. The problem was solved ingeniously. The mill was built at the foot of the steep hillside. A short smokestack——it was no more than six feet high——was built some distance up the hill. It was made of slabs of native stone and its walls were over four feet thick. (Baldwin Ms:2-3, quoted in Kelly and Crozier 1974b:16)

In 1867, the mill along with 9.75 acres of Waiʻōhinu, sugar-mill machinery and tools, carts, horses, cattle, mules, and sheep were deeded to Janion, Green Co. who then sold the assets to Captain Robert Brown (Kelly and Crozier 1974a and b). In 1871, the following advertisement appeared in a Honolulu newspaper:

> SUGAR PLANTATION FOR SALE!
>
> This Property consists of 18 acres in Fee Simple with Dwelling House, Sugar House, Boiling and Outhouses thereon.
>
> The fixtures are a Sugar mill with horse power, 1 clarifier, and cooler, 20 iron Dryers, 90 wood Dryers, foundation for boiling grates, five frame sat and smoke stacks, foundation for centrifugal and tank to centrifugal, sheet iron for a boiling pan with tools to make it. 65 acres of cane that will yield two tons to the acre on 180 acres of the best of sugar land, Cane ready for the mill November next; land leased for ten years at $36 per year, with privileges of extention. Also, 1 two horse wagon, 1 horse, 4 harnesses, 27 head of choice cattle, Blacksmith tools, shop tools, Plantation tools, etc.
>
> This property I wish to dispose of, as we are about to leave the Islands.
>
> Terms--Cash or approved paper, Inquire Robert Brown or Walker , Allen, Honolulu, or N. C. Haley, on the premises, Waiohinu, Kau, Hawaii (Advertisement March 11, 18 and 25, 1871, sourced from Kelly and Crozier 1974:17).

The mill was soon thereafter deeded by Robert Brown to Charles Bishop, and then eventually sold to Alexander Hutchinson (Kelly and Crozier 1974a and b).

In 1868, Alexander Hutchinson founded the Naʻalehu Sugar Company. Hutchinson and his partner, Costa, had 225 acres in Nāʻālehu. After a disagreement Costa moved his operations to Waiʻōhinu (Kaʻu Sugar Co 1972). Housing for plantation workers was built within Nāʻālehu. Large mills were constructed in Nāʻālehu and Hīlea.

In 1875, the Waiʻōhinu Plantation was established by John Nott & Company. It was built on land purchased by the ABCFM. Hutchinson purchased the Waiʻōhinu Plantation in 1877, as well as the land utilized by Costa (Kaʻu Sugar Co 1972).

Hutchinson passed away in 1879, however, consolidation of plantations continued. The Naʻalehu Sugar Company and Hilea Plantation were purchased by William G. Irwin and his associates (Kaʻu Sugar Co 1972). In 1884, the Naʻalehu Sugar Company became the Hutchinson Sugar Plantation Company. By 1889, the Hutchinson Sugar Plantation Company had mills at Nāʻālehu, Honuʻapo, and Hīlea.

The Hawaiian Agricultural Company started between the years 1876 and 1880 and became the largest plantation company in Hawaiʻi. The mill was started by a group of bankers, including Charles Bishop, John Dominis, and Peter Jones (Kaʻu Sugar Co 1972, Elwell and Elwell 2015). It was also locally referred to as the Pahala Plantation, as the laborers housing was located in Pāhala. Mills were built in Nāʻālehu and Pāhala. Wharves were built at Honuʻapo and Punaluʻu to ship out all the Kaʻū sugar. The sugar cane was transported by mules, flumes, and later rail and trucks.

Kaʻu Sugar Company, Inc. formed with the merger of the Hutchinson Sugar Plantation Company and Hawaiian Agricultural Company. In 1972, the Hawaiian Agricultural Company changed its name to Kaʻu Sugar Company. In 1986, it began growing and selling macadamia nuts and changed its name to the Kaʻu Agribusiness Company (Elwell and Elwell 2015). The company ceased operations in 1996.

2.3.3.3 Coffee

Cultivation of coffee within Kaʻū began in the early 1900s. Kau Coffee Mill started in 2012 and has won both statewide and international competitions (Elwell and Elwell 2015). The Kaʻū Coffee Festival is the largest annual event in the district.

2.3.3.4 Ranching

Neighboring ahupuaʻa became heavily invested in cattle ranching. Kahuku Ranch was just west of the project area and to the east was a rodeo in Nāʻālehu. Kahuku Ranch was opened by Charles C. Harris in 1861 (Ako 2005). By 1865, Captain Robert Brown had purchased the ranch lands and sold salted beef the ships and the hides were made into leather. The ranch also supported a population of ducks, chickens, pigs, horses and goats. In the 1870s the ranch was purchased by George Calhoun Jones and it included some 184,000 acres stretching from Mauna Loa to the ocean (Ako 2005). The ranch then included mules, oxen, donkeys, sheep, turkey, geese, quail, and chickens.

2.4 1900s

In 1900, Waiʻōhinu became the county seat of Kaʻū within the territory of the United States. The courthouse, jail, post office and school were all situated in Waiʻōhinu until the 1930s (Elwell and Elwell 2005).

Shirakawa Hotel near the center of Waiʻōhinu provides overnight accommodations for visitors. According to a 1988 article in *The New York Times*, the Shirakawa Hotel opened in 1926 as a family-operated lodging house or way stop for traveling salesmen (Tregaskis 1988). This is substantiated by an oral account by resident and former owner, Takumi Shirakawa, who noted the

many sales people who would take the long journey to Waiʻōhinu to stock plantations and stores and then need a place to spend the night (Ako 2005). During WWII, the military took over the hotel. The Shirakawa family ran the hotel thereafter, building a motel of thirteen rooms "amid trees dripping red and yellow hibiscus flowers" (Tregaskis 1988:14).

Section 3 Previous Archaeology

Kaʻū has long been understood to be an early landing for Polynesian settlers on Hawaiʻi. Ka Lea at the South Point of Hawaiʻi Island includes Puʻu Aliʻi (royal hill) sand dune site, Waiʻahukini Rockshelter, and Makalei Rockshelter which were found to contain abundant traditional Hawaiian artifacts and some of the earliest radiocarbon dates obtained in the archipelago. Fishhooks found at these sites were used to create a chronology of fishhook design. Modern re-dating of the earliest site, Waiʻahukini, has provided a narrower time frame for Hawaiian colonization of the islands. It had been thought that South Point was utilized as early as AD 750, however, modern dating techniques found the site to have been occupied during the 14th and early 15th centuries (Mulrooney et al. 2014). The sites at South Point continue to provide founding data on Hawaiian history.

Another important site within Kaʻū includes footprints of AD 1790 (SIHP #50-10-61-5505, National Register #74000351). Approximately 1,773 footprints are preserved within a lava flow at the Footprints Trail in Hawaiʻi Volcanoes National Park and provide evidence of a battle between the chief of Kaʻū, Keoua Kuʻahuʻula, and Kamehameha. The prints represent a minimum of 441 men, women, children, as well as hogs who were traveling through the Kaʻū Desert with the chief's army after the battle (Apple 1973).

3.1 Previous Archaeological Studies in Waiʻōhinu Ahupuaʻa

In the early twentieth century, Bishop Museum archaeologist, John Stokes, documented a large number of cultural sites throughout the island of Hawaiʻi, including within Kaʻū District. Three heiau (traditional places of worship) were documented in Waiʻōhinu. The three sites are described below, as presented by Stokes (1991:123):

Paneʻe Heiau
Bishop Museum Catalogue: 50-HaB17-3
State of Hawaii Catalogue: 3594

Heiau of Paneʻe, land of Waiʻōhinu, Kaʻū. Located in Waiʻōhinu village on a lot adjoining and to the west of the post office. The *heiau* foundation was destroyed many years ago, and the site is now occupied by a house.

Pāpāmoana Heiau
Bishop Museum Catalogue: 50-Ha-B17-2
State of Hawaii Catalogue: 3593

Heiau of Pāpāmoana, land of Waiʻōhinu, Kaʻū. Located in Waiʻōhinu village between the main road and the stream bed on the north, on land registered in the name of Emma Hewitt in 1906. This *heiau* was destroyed long ago. The local account was that Imakakaloa was sacrificed at this *heiau*. Kiwalaʻo, the officiating chief, offered up the fruits and the pig but hesitated to seize the decaying body of Imakakaloa. Kamehameha immediately seized the body and made the offering, dismissing the assembly. (Refer to the heiau of Pākini)

Kalamakoī Heiau
Bishop Museum Catalogue: 50-Ha-B17-1
State of Hawaii Catalogue: 3592

Heiau of Kalamakoī, land of Waiʻōhinu, Kaʻū. Located 125 feet north and 300 feet east of the Kaʻaluʻalu road junction of the main road. Molale benchmark bares 61°13', 7817 feet. This is a platform heiau with walls 3.5 feet high on the west side and 7.5 feet high on the east. At the middle of the northern side, a portion of the pavement is 2 feet lower than the main surface. This portion rises gradually to the west until it reaches the level of the main surface. It is from 1 to 2 feet above the ground surface and was probably used as the entrance. The western portion is partly separated from the rest by an L-shaped wall.

Three additional previous archaeological studies have been conducted near the current project area (Table 3 and Figure 10). Two of the studies focused on Waiʻōhinu Drainage Improvements, located approximately 1,811 feet (552 meters or 0.34 miles) to the northeast. One study focused on a property along Kamoa Road, located approximately 1,657 feet (505 meters 0.31 miles) to the south.

Table 3. Table Listing Previous Archaeological Studies Conducted Near the Project Area

Author	Type of Study	Location	Findings (SIHP #50-10-76)
Stokes 1991 (not on Figure 10)	Archaeological Survey and Documentation	Island-wide	Three heiau near Waiʻōhinu: Paneʻe, Pāpāmoana, and Kalamakoī
Kelly and Crozier 1972a	Archaeological Survey and Documentation	Waiʻōhinu Drainage Improvements	7 sites documented, a traditional shrine (-2600), sugar mill complex (-2601), historic house platforms (-2602 and -2603), missionary road (-2604), carriage road (-2605), and historic ʻauwai system (-2606), also mentions free-standing stone walls, terrace walls, and retaining walls
Kelly and Crozier 1972b	Archaeological Survey and Excavations (Phase II)	Waiʻōhinu Drainage Improvements	7 sites documented, a traditional shrine (-2600), sugar mill complex (-2601), historic house platforms (-2602 and -2603), missionary road (-2604), carriage road (-2605), and historic ʻauwai system (-2606)
Meinecke 1981	Documentation of a Historic Site	Kamoa Road, Waiʻōhinu; TMK: 3-9-4-2	Discusses a remnant site of unknown function

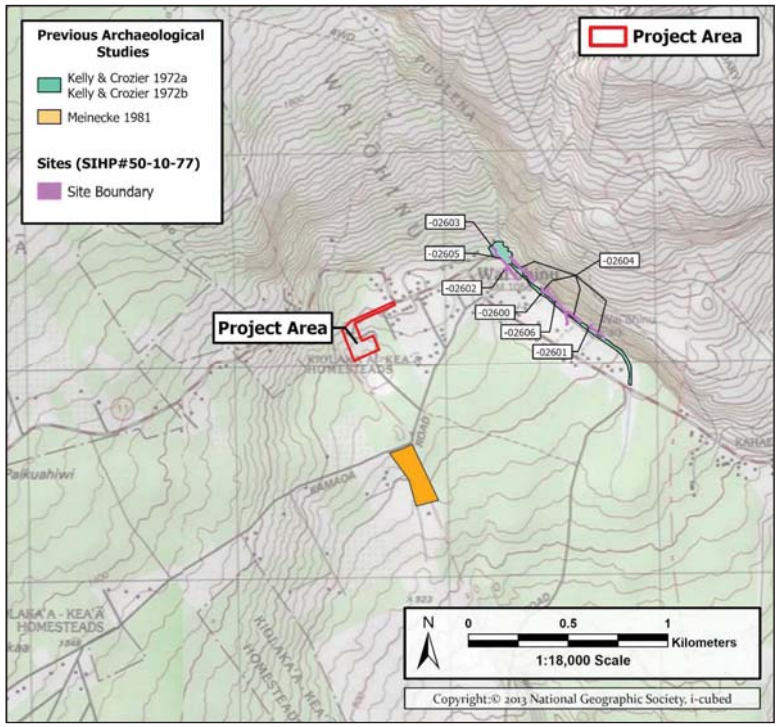

Figure 10. Portion of an 1998 USGS showing previous archaeological studies and sites conducted near the current project area

3.1.1 Kelly and Crozier 1974a and b

In 1972, two phases of a study were conducted by Kelly and Crozier of the Bishop Museum regarding improvements to the Waiʻōhinu Drainage system along the east edge of Waiʻōhinu Ahupuaʻa (Kelly and Crozier 1972a and b). Phase I included a walk-through survey and documentation of a small traditional Hawaiian shrine (SIHP #50-10-76-2600), a historic sugar mill site (SIHP #50-10-76-2601), as well as historic house platforms (SIHP #50-10-76-2602 and -2603), a missionary road (SIHP #50-10-76-2604), carriage road (SIHP #50-10-76-2605), an ʻauwai (ditch) system (SIHP #50-10-76-2606), free-standing stone walls, terrace walls, and retaining walls (Kelly and Crozier 1972a and b). The free-standing, dry-stacked stone walls were found to be associated with kuleana land boundaries and were documented in good to very poor condition. The walls measured approximately 1 m in height and between 70-80 cm in width. Short terrace walls measuring approximately 10 m in length and averaging 35 cm in height were documented and found to have leveled the sloping terrain for agricultural purposes. Retaining walls were recorded which served to stop water, rocks, and soil from coming down from higher ground. The retaining walls were often located along the pali (cliff) slopes near house structures and stream beds. A minimum of four rectangular historic house platforms constructed of packed dirt were recorded. Each house platform had at least two adjacent retaining walls. An ʻauwai or ditch system was recoded on the relatively flat land below the pali slopes. The ʻauwai channeled water from Waiʻōhinu Stream through agricultural fields. The ditch measured approximately 60 cm deep and 1 meter wide. An old stone-paved carriage road extended towards the Shirakawa Hotel. The carriage road measured approximately 2.5 m wide and had stone curbing on both sides. Stone walls and a terrace were constructed over the top of the carriage road. A missionary road was recorded closely paralleling the alignment of the drainage canal. The missionary roadway included an adjacent retaining wall. Several stone walls were constructed over the roadway. (Kelly and Crozier 1974a and b)

Phase II included additional research and documentation as well as excavation at three sites, including the traditional Hawaiian shrine (SIHP # -2600) and two historic house platforms (SIHP # -2602 and -2603). The shrine was documented measuring approximately 6.5 m by 11.6 m with the south face incorporating three large upright stones standing 55 to 65 cm above the ground surface (Kelly and Crozier 1972b:22). Five test units and a 1 m wide by 9 m long trench were excavated within the site. A large stone paving was encountered approximately 15 cm below the ground surface (cmbs) within the perimeter of the site, and a smaller paving was documented extending further southward. Two raised steps were also documented within the site. The soil was consistent to 80 cmbs with only one stratigraphic layer represented. Two upright stones were found to extend 10 cm deeper than identified stone paving, therefore, it was determined the stones were in place before the paving was placed. Test Unit 1 focused on a square fire pit feature, determined to be a later addition to the site constructed during the historic time period. Test Units 2-5 documented two layers of stone paving. One traditional artifact, a basalt file, was recovered from the shrine site.

Historic House Structure #1 (SIHP # -2602), consisting of a walled house foundation with two platforms, was excavated. It was thought the house was occupied by Charles Spencer in the mid-19th century. A recovered piece of volcanic glass was analyzed using hydration-rind dating and provided a date of 1801 ± 12 A.D. Additional objects found during excavation indicated the structure was occupied into the 20th century. A 1 m wide by 10 m long test trench was excavated through the site. A very dense accumulation of historic materials was found in the lower platform

of the house site, including several hundred bottles, potsherds, metal objects, and animal bone (Kelly and Crozier 1972b). Three traditional Hawaiian artifacts were also recovered from the house structure, including a grinding stone fragment, coral abrader, and poi pounder base. The upper platform was determined to have been used as a sleeping area, while the lower platform had been utilized as a kitchen and eating quarters. The excavation also found a layer of stone paving with two steps constructed below, indicating earlier use of the site area.

Historic House Structure #2 (SIHP # -2602), a stepped-house structure with three platforms measuring a total of approximately 10 m by 20 m, was investigated. Three test units were excavated. The test units documented a layer of stone paving, marine shell fragments, volcanic glass, historic debris, and animal bone. Hydration-rind dating provided dates of 1523 ± 15 and 1798 ± 10 A.D. (Kelly and Crozier 1974b). Documented stratigraphy found two layers of soil over top of a layer of stone paving.

The Waiohinu Sugar Mill (SIHP # -2601), the first sugar mill in Kaʻū District, was investigated. The mill is located on a low cliff above the current Waiʻōhinu Park. The flue and smoke stack were still existing. The flue followed the slope of the hill and a short, thick-walled smoke stack measuring approximately 3 m in height by 2.6 m diameter wide with a 70 cm diameter hole in the center were documented in fairly good condition (Kelly and Crozier 1974a and b).

Two sites were recommended for preservation, consisting of the sugar mill and missionary road. With these recommendations, the drainage channel was re-aligned to avoid the sugar mill site.

3.1.2 Meinecke 1981

In 1981, a letter report was written by William Meinecke with the Bishop Museum regarding a property on Kamoa Road within Waiʻōhinu (Meinecke 1981). The letter relates that a former site had existed on the property at one time, however, the site had been destroyed by private rock removal for use in building pigpens and corals and overgrowth of christmasberry trees and other vegetation. The report describes that the Federal Soil Conservation Program planned to conduct erosion control, planting of windbreaks, vegetable and decorative gardens, native trees, fruits, herbs and vegetables to be planted around the former “ruins” (Meinecke 1981:1). Some landscaping, installation of an access driveway, and a water catchment had already been installed on the property. A storage/workshop building was also planned to be situated near but not on top of “remaining stones of the ruins” (Meinecke 1981:1). Public access to the park-like setting was proposed.

Section 4 Archaeological Field Inspection

Fieldwork for this project was conducted on February 22th, 2020 by Frederick LaChance, B.A under the supervision of Rosanna Thurman, M.A. (principal investigator). Fieldwork required approximately 3 person-hours to complete. Fieldwork for this project was performed under the archaeological permit number 20-15 issued to Honua Consulting by the SHPD/DLNR in accordance with HAR Chapter 13-282.

4.1 Methodology

The archaeological field inspection consisted of a 100% pedestrian survey of the property. The pedestrian survey consisted of the traversal of several northeast-southwest trending transects across the property, spaced at approximately 10-meter intervals (Figure 11). A visual inspection of the ground surface of the property was conducted and the surveyed area was photo-documented. A hand-held Trimble GeoXH (6000 Series) was used to record survey tracks. The Trimble maintained an accuracy ranging between 1 to 3 meters (3-10 feet). No artifacts or cultural features were observed during the project.

Figure 11. Aerial Photo Showing Survey Transects Completed Throughout the Project Area (2011 Orthoimage)

4.2 Survey Results

The general area of survey was located on the grounds of the Wai‘ōhinu Transfer Station, directly southwest of Kaulia Road. The survey area included the proposed construction project area, encompassing 5.23 acres (227,674 sq. ft), measuring 294 x 188 meters (see Figure 11). Field conditions were favorable with partly cloudy skies and excellent ground visibility for most of the survey area. Much of the survey area was paved or consisting of low-cut vegetation. However, a southern portion of the survey area was overgrown with California grass (*Brachiaria mutica*), measuring over six feet tall, which dramatically limited ground visibility. The transfer station was open and actively used during the time of the survey.

The pedestrian survey commenced in the northeastern extent of the construction project area at the intersection of Kaulia Road and Māmalahoa Highway. Kaulia Road is a single-lane, asphalt road providing access to the Wai‘ōhinu Transfer Station (Figure 12). The Wai Puna water station, which is a spring fed, community water source, is located along the northern edge of Kaulia Road (Figure 13). The main gate to the Wai‘ōhinu Transfer Station was located approximately 200 meters from the intersection of Kaulia Road and Māmalahoa Highway (Figure 14).

Once through the main gate, the survey continued in the northern portion of the construction project area. The northern portion of the survey area was gradually sloped, consisting of a paved road accessing the office (portable building), recycling bins, and main trash chute (Figure 15). Chain-link fencing was observed along the northern project boundary, continuing to the main trash chute area (Figure 16).

The central portion of the survey area consisted of an asphalt paved turn-around accessing the back of the trash chute, a small storage building, addition recycling bins, and parked semi-truck trailers (Figure 18 and Figure 19). The central area is relatively flat with a small amount of short-cut grasses.

The pedestrian survey concluded in the southern portion of the construction project area which was dominated by gradually sloped, previously graded land, overgrown with California grass (*Brachiaria mutica*). Survey transects through this area were difficult to perform and visibility was very poor (Figure 20). No evidence of constructed elements was encountered in the tall grasses. The extreme southeast corner of the survey was forested with strawberry guava (*Psidium cattleyanum*) and the southern edge of the survey area was grubbed and graded (Figure 21 and Figure 22).

The entire survey area was completely impacted by previous grading and construction efforts, exhibiting no signs of pre-Contact or historic sites or features. No artifacts or cultural deposits of any kind were observed during the field inspection.

Figure 12. Photo of Kaulia Road which provides access to Waiohinu Transfer Station, looking southwest

Figure 13. Photo of the Wai Puna water station, located along Kaulia Road, looking southwest

Figure 14. Photo of the Waiohinu Transfer Station front gate, looking southwest

c

Figure 15. Photo of the northern portion of the survey area, looking southwest

Figure 16. Photo of the fenced northwestern corner of the survey area, looking east

Figure 17. Photo of the main trash chute located in the northern portion of the survey area, looking south

Figure 18. Photo of the asphalt paved turn-around located in the central portion of the survey area, looking southwest

Figure 19. Photo of the area behind the main trash chute located in the central portion of the survey area, looking northeast

Figure 20. Photo of the eastern corner of the southern survey area, looking southwest

Figure 21. Photo of the southeastern corner of the survey area, looking west

Figure 22. Photo of the northeastern corner of the survey area, looking northeast

Section 5 Summary and Recommendations

This project was completed at the request of Wilson Okamoto Corporation. Honua Consulting conducted this literature review and field inspection to assist with historic preservation efforts associated with improvements to the Waiʻōhinu Transfer Station located in Waiʻōhinu Ahupuaʻa, Kaʻū District, on the island of Hawaiʻi, Tax Map Key (TMK): [3] 9-5-005:001. The project area includes 5.23 acres of land owned by the State of Hawaiʻi and utilized by the County of Hawaiʻi Department of Public Works.

Background research indicates Waiʻōhinu was traditionally a fertile land with permanently flowing streams fed by natural spring sources. During the Māhele in the mid-1800s, Waiʻōhinu was retained as Crown Land by Kamehameha III. Waiʻōhinu was devastated during earthquakes and volcanic activities of 1868, in which historical accounts attest to many structures, including stone walls and thatched houses, being destroyed. Multiple sugar cane plantations operated within and near Waiʻōhinu throughout the mid- to late- 1800s, the last mill closed in 1996. Homestead Lots were plotted throughout Waiʻōhinu, Lots 43-52 are adjacent to the current project area. The project area appears to have remained largely undeveloped to the present time.

A few archaeological studies have been conducted in the vicinity of the project. Archaeological studies focused on a drainage improvement project approximately 1,811 feet (552 meters or 0.34 miles) feet to the northeast of the project, which documented a traditional Hawaiian shrine (SIHP #50-10-76-2600) and multiple historic sites and structures (SIHP #50-10-76-2601 to -2606) associated with early missionary and plantation activities. Another archaeological project was conducted approximately 1,657 feet (505 meters 0.31 miles) feet to the south of the project, which reported that a previous stone feature had existed however it was destroyed by rock removal and only foundation stones remained.

The current field inspection included a 100% pedestrian survey of the property. No cultural features or significant cultural artifacts were observed or documented. Based on the results of background research and the field survey, this study finds the project effect determination is “no historic properties affected”. However, no sub-surface archaeological investigations have been conducted on the property to assess the potential for cultural deposits to exist. Therefore, an archaeological monitoring program is recommend to be conducted in accordance with HAR 13-279 (Rules Governing Standards for Archaeological Monitoring Studies and Reports) to document and mitigate any potential cultural deposits and/or artifacts that may be encountered during ground disturbing activities in association with the project.

The conducted archaeological investigation is not an archaeological inventory survey (AIS), however, this report was intended to be written using standards outlined within HAR 13-276 for AIS studies and is intended to assist with historic preservation efforts for the proposed project.

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Appendix A LCA 8121

Mahele Record: 08121

Claim Number:	08121
Claimant:	Honolulu
Other claimant:	
Other name:	
Island:	Hawaii
District:	Kau
Ahupua:	Waiohinu
Ili:	Kahonu 2, Kaakepa, Puulena

Apana:	3	Awarded:	1
Loi:	0	FR:	
Pua:		NR:	158v8
Mala Taro:	24	FT:	
Kula:	0	NT:	443v8
House lot:	2	RP:	7020
Kihapai/Pakaru:	0	Number of Royal Patents:	1
Salt lands:	0	Koele/Poalima:	No
Wauke:	1	Loko:	No
Olona:	0	Lokoia:	No
Noni:	0	Fishing Rights:	No
Hala:	0	Sea/Shore/Dunes:	Yes
Sweet Potatoes:	0	Auwai/Ditch:	No
Irish Potatoes:	0	Other Edifice:	No
Bananas:	0	Spring/Well:	No
Breadfruit:	0	Pigpen:	Yes
Coconut:	0	Road/Path:	No
Coffee:	0	Burial/Graveyard:	No
Oranges:	0	Wall/Fence:	No
Bitter Melon/Gourd:	0	Stream/Muliwai/River:	No
Sugar Cane:	0	Pali:	No
Tobacco:	0	Disease:	No
Koa/Kou Trees:	0	Claimant Died:	No
Other Plants:	0	Other Trees:	0
Other Mammals:	No	Miscellaneous:	

Document Text

No. 8121, Honolulu, January 25, 1848
N.R. 158v8

Hear ye, ye Land Commissioners at Honolulu: I, Honolulu, am a claimant in Ka'u, District 2, Island of Hawaii. The name of the Ahupua'a is Waiohinu; my claim for 1 mo'o, named Kahonu, is there. It extends from the forest to the sea. Two kihapai are at Kaakepu, four kihapai are at Puulena. There are two house lots. It is finished.
HONOLULU

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