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FEB - 8 2020

87-2020 Farrington Highway ■ Waianae, Hawaii 96792 ■ Tel: 808 668-4561 ■ FAX: 808 668-1368 ■ Website: [www.pvtland.com](http://www.pvtland.com)

January 29, 2019

Keith Kawaoka, Acting Director  
Office of Environmental Quality Control  
Department of Health, State of Hawaii  
235 S. Beretania Street, Room 702  
Honolulu, Hawaii 96813

Kathy Sokugawa, Acting Director  
City and County of Honolulu,  
Department of Planning and Permitting  
7th Floor, 650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kawaoka and Ms. Sokugawa,

With this letter, PVT Land Company, Ltd. (PVT) hereby transmits the document package for the Final Environmental Impact Statement (EIS) for the *PVT Integrated Solid Waste Management Facility (ISWMF) Relocation* situated at Tax Map Key (1) 8-7-009:07 in the Waianae District on the Island of Oahu for publication of a notice of availability in the next edition of the Environmental Notice and for evaluation of the acceptability under Section 11-200-23, Hawaii Administrative Rules.

Also enclosed in a distribution list for the verification of OEQC under Section 11-200-20, Hawaii Administrative Rules. Upon receiving verification from OEQC, (along with the link to the Environmental Notice containing the pertinent details for commenters), we will make the Final EIS and the link available to those indicated on the distribution list.

Finally, enclosed is one hard copy and three electronic copies of the completed OEQC Publication Form and the Final EIS Volumes I, II and III. Simultaneously with this letter, we have submitted a summary of the action in a text file by email to OEQC.

If there are any questions, please contact Stephen Joseph of PVT Land Company, Ltd. at [steve@pvtland.com](mailto:steve@pvtland.com) or Karl Bromwell of Hart Crowser, Inc. at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in blue ink that reads 'Stephen Joseph'.

Stephen Joseph  
Vice President

- Enclosures:
- (1) One Hard Copy: OEQC Publication Form, Final EIS Volume I, II and III, Final EIS Distribution List
  - (2) Three Electronic Copies: OEQC Publication Form (pdf and MS word), Draft EIS Volume I and Volume II (pdf), Draft EIS Distribution List (pdf)

20-190

## APPLICANT PUBLICATION FORM

Project Name:	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation
Project Short Name:	PVT ISWMF Relocation
HRS §343-5 Trigger(s):	Propose landfill; HRS §343-5(a)(9)(C)
Island(s):	Oahu
Judicial District(s):	Waianae
TMK(s):	(1) 8-7-009:007
Permit(s)/Approval(s):	<ul style="list-style-type: none"> <li>State of Hawaii, Department of Health, Solid and Hazardous Waste Branch, Solid Waste Management Permit Modification</li> <li>State of Hawaii, Department of Health, Clean Water Branch, National Pollutant Discharge Elimination System for Storm Water Associated with Industrial Activity NOI B Modification</li> <li>State of Hawaii, Department of Health, Clean Air Branch, Noncovered Source Permit</li> <li>State of Hawaii, Department of Health, Wastewater Branch, Individual Wastewater System Permit</li> <li>State of Hawaii, Office of Planning, Land Use Commission, Special Use Permit</li> <li>City and County of Honolulu, Planning Commission, Special Use Permit</li> <li>City and County of Honolulu, Department of Planning and Permitting, Conditional Use Permit Major</li> </ul>
Approving Agency:	City and County of Honolulu, Department of Planning and Permitting, Planning Division
Contact Name, Email, Telephone, Address	Franz Krainitz, AICP Email: fkrainitz@honolulu.gov Tel: (808) 768-8046 7th Floor, 650 South King Street Honolulu, HI 96813
Applicant:	PVT Land Company, Ltd.
Contact Name, Email, Telephone, Address	Stephen E. Joseph, Vice President Email: Steve@pvtland.com Tel: (808) 668-4561 87-2020 Farrington Highway Waianae, HI 96792
Consultant:	Hart Crowser, Inc.
Contact Name, Email, Telephone, Address	Karl Bromwell Email: karl.bromwell@hartcrowser.com Tel: (808) 587-7747 7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240 Honolulu, HI 96813

**Status (select one)**
☐ DEA-AFNSI

☐ FEA-FONSI

☐ FEA-EISPN

☐ Act 172-12 EISPN  
 ("Direct to EIS")
**Submittal Requirements**

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.

Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.

Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.



- ☐ DEIS Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
- ☒ FEIS Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
- ☐ FEIS Acceptance Determination The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
- ☐ FEIS Statutory Acceptance The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.
- ☐ Supplemental EIS Determination The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
- ☐ Withdrawal Identify the specific document(s) to withdraw and explain in the project summary section.
- ☐ Other Contact the OEQC if your action is not one of the above items.

**Project Summary**

Provide a description of the proposed action and purpose and need in 200 words or less.

PVT owns and operates the only publicly-available, commercial construction and demolition (C&D) debris management facility on Oahu. Its facility is part of the City and County of Honolulu's solid waste management plan and provides a critical service to the construction industry and the City's disaster response efforts.

PVT's materials recovery facility reuses or recycles 80% of the C&D debris received. While this has extended the life of the landfill, the construction boom on Oahu has generated more C&D debris than anticipated. PVT is initiating landfill closure activities in accordance with its permit.

The PVT facility closure would leave Oahu without a C&D landfill and materials recovery facility. PVT proposes to (1) relocate its C&D debris receiving, recycling, and disposal operation to a parcel, owned by a PVT-affiliate, on the opposite side of Lualualei Naval Road from its current location, (2) upgrade its recycling operations by installing two materials recovery and processing lines, and (3) install renewable energy facilities (a gasification unit or anaerobic digestion system and photovoltaic panels) to power its operations. The relocation will allow uninterrupted C&D debris management, focusing on the diversion of 80% of construction debris from the landfill through reuse and recycling.

# **Final Environmental Impact Statement**

**Prepared in Accordance with Hawaii Revised Statutes Chapter 343 and  
Hawaii Administrative Rules Chapter 11-200.**

## **PVT Integrated Solid Waste Management Facility Relocation**

**Waianae District, Oahu, Hawaii**

**TMK: (1) 8-7-009:07**

**January 2020**

**Volume I**

Prepared for:



Prepared by:



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# Final Environmental Impact Statement

Prepared in Accordance with Hawaii Revised Statutes Chapter 343 and  
Hawaii Administrative Rules Chapter 11-200.

## PVT Integrated Solid Waste Management Facility Relocation

**Waianae District, Oahu, Hawaii**

**TMK: (1) 8-7-009:07**

The Draft Environmental Impact Statement, and all ancillary documents were prepared under the signatory's direction or supervision, and the information submitted, to the best of the signatory's knowledge, fully addresses document content requirements as set forth in Hawaii Administrative Rules § 11-200-15, as applicable.

**Volume I**



Stephen E. Joseph, PVT Land Company, Ltd.

January 2020

Date

Prepared for:



Prepared by:





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## NOTE TO READER

This Final Environmental Impact Statement (EIS) includes the complete text of the Draft EIS and all comment letters received by the City and County of Honolulu, State of Hawaii, Federal agencies and the public. It also includes any changes or revisions to the text resulting from those letters.

Pursuant to the requirements of Section 11-200-18(D), Hawaii Administrative Rules, “The text of the final EIS which [sic] shall be written in a format which allows the reader to easily distinguish changes made to the text of the draft EIS.”

To comply with this requirement, all SUBSTANTIVE changes and/or revisions to the Draft EIS are presented in a table at the beginning of each chapter. Relevant section and page number are provided. Any additions are presented in bold face, italicized, and underlined text and any omissions have a strikethrough. Nonsubstantive revisions, e.g. changing Draft EIS to Final EIS, correction of spelling errors, typos, renumbering of the Table of Contents, are NOT identified in this manner.

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## Project Summary

The following revisions were made to the Project Summary in the Final EIS in response to the Draft EIS comments.

<u>Section</u>	<u>Page</u>	<u>Revisions</u>
Alternatives to the Proposed Action Considered	ii	<ul style="list-style-type: none"> <li>Alternative <b><i>designs and</i></b> technology - PVT diverts 80% of the incoming debris from the landfill and continues to explore new technologies for increasing the diversion rate. Currently, there are no technologies that would eliminate the need for a C&amp;D landfill. <b><i>PVT considered several design alternatives in the development of the Proposed Action. The Proposed Action was designed to minimize visual, noise, and dust impacts on the residential communities located south of the Project Site and to optimize the safety and engineering design.</i></b></li> <li>Postpone relocation - The timing of the Proposed Action is dependent on the existing C&amp;D landfill reaching its permitted capacity, which is dependent on the construction industry. Flexibility in the schedule is included in the project description and risks associated with delays would be assumed by PVT <b><i>ultimately be borne by the construction industry.</i></b></li> </ul>

<b>Project</b>	<b>PVT Integrated Solid Waste Management Facility Relocation</b>
Applicant	PVT Land Company, Ltd. Attention: Stephen E. Joseph, Vice President 87-2020 Farrington Highway Waianae, Hawaii 96792 Tel: (808) 668-4561
Approving Agency	City and County of Honolulu Department of Planning and Permitting Attention: Franz Krintz, AICP 7th Floor, 650 South King Street Honolulu, Hawaii 96813 Tel: (808) 768-8020
HRS Ch. 343 Trigger	Proposed Action includes a landfill which triggers compliance with Hawaii Environmental Impact Statement laws HRS § 343-5 (9) and HAR Ch.11-200. DPP has determined at the outset that an EIS is required for the Proposed Action.
Landowner	Leeward Land Company, Ltd., an affiliate of PVT Land Company, Ltd.



PVT ISWMF Relocation  
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Project	PVT Integrated Solid Waste Management Facility Relocation
Agent	Hart Crowser, Inc. Attention: Karl Bromwell, Principal 7 Waterfront Plaza, 500 Ala Moana Blvd., Suite 7-240 Tel: (808) 587-7747
Location	Nanakuli, Waianae District, Oahu, Hawaii / (1) 8-7-009:07
Land Use Regulation	<ul style="list-style-type: none"> <li>State Agricultural District (Hawaii Revised Statutes Chapter 205).</li> <li>City and County of Honolulu AG-2 General Agricultural District (Revised Ordinances of Honolulu § 21-3).</li> </ul>
Purpose and Need	<p>The purpose of the Proposed Action is for PVT to provide uninterrupted construction and demolition (C&amp;D) waste management services for Oahu by relocating their existing operations to an adjacent location. PVT operates the only commercial C&amp;D waste management facility on Oahu that is available for public use. The facility is approaching capacity and PVT is initiating closure activities of the facility, in accordance with their Solid Waste Management Permit. The City and County of Honolulu solid waste management plans for the 25-year horizon rely on PVT's continued operations as a C&amp;D waste management facility and a designated disaster debris processing location.</p>
Proposed Action	<p>The key components of the Proposed Action are:</p> <ul style="list-style-type: none"> <li>Relocate C&amp;D waste receiving, materials sorting/recycling, and C&amp;D disposal operations.</li> <li>Relocate, modernize, and enhance recycling operations (e.g., installation of two materials recovery and diversion process lines).</li> <li>Install renewable energy facilities to power PVT operations (e.g., gasification unit or anaerobic digestion system, and photovoltaic panels).</li> </ul>
Alternatives to the Proposed Action Considered	<p><b>Retained:</b></p> <ul style="list-style-type: none"> <li>No Action Alternative. Would not meet the purpose and need for the Proposed Action but retained as a baseline of existing conditions for the impact analysis of the Proposed Action.</li> </ul> <p><b>Dismissed:</b></p> <ul style="list-style-type: none"> <li>Alternative designs and technology - PVT diverts 80% of the incoming debris from the landfill and continues to explore new technologies for increasing the diversion rate. Currently, there are no technologies that would eliminate</li> </ul>

Project	PVT Integrated Solid Waste Management Facility Relocation
	<p>the need for a C&amp;D landfill. PVT considered several design alternatives in the development of the Proposed Action. The Proposed Action was designed to minimize visual, noise, and dust impacts on the residential communities located south of the Project Site and to optimize the safety and engineering design.</p> <ul style="list-style-type: none"> <li>• Postpone relocation - The timing of the Proposed Action is dependent on the existing C&amp;D landfill reaching its permitted capacity, which is dependent on the construction industry. Flexibility in the schedule is included in the project description and risks associated with delays would ultimately be borne by the construction industry.</li> <li>• Location alternatives – Based on the analysis and findings of two comprehensive landfill siting studies prepared by the City and County of Honolulu, and the PVT criteria for site selection, no alternative locations were identified that met the purpose and need.</li> </ul>
Potential Beneficial Impacts	<p>Beneficial impacts were identified for the following resources:</p> <ul style="list-style-type: none"> <li>• Solid Waste Management and Recycling</li> <li>• Wildfire Hazards / Demand on Fire Services</li> <li>• Demand on Power Services</li> <li>• Archaeological and Historic Resources</li> <li>• Socioeconomic Resources</li> </ul> <p>Specific benefits include:</p> <ul style="list-style-type: none"> <li>• Reduce the volume of C&amp;D debris that is disposed of in landfills, thereby maximizing the operational life of the landfill in support of the construction industry and disaster preparedness.</li> <li>• Generate feedstock from the C&amp;D debris to be used as an alternative fuel by energy producers; supporting the CCH and State goals for alternative energy sources and reducing our reliance on fossil fuels.</li> <li>• Operate the proposed facility in a sustainable, financially feasible manner to ensure that the life of the landfill is maximized.</li> <li>• Indirectly, the increased recycling and non-recyclable disposal capacity could reduce the amount of illegal waste disposal.</li> </ul>

PVT ISWMF Relocation  
Final Environmental Impact Statement

Project	PVT Integrated Solid Waste Management Facility Relocation
Potential Adverse Impacts	<p>Direct and indirect (secondary) significant adverse impacts have been anticipated by PVT based on their years of operations in the community. PVT is committed to avoiding or minimizing these anticipated impacts through design, site development, and operations. The specific mitigating measures are described in the Proposed Action description and include compliance with their Solid Waste Management Permit. No residual significant adverse impacts were identified. Less than significant adverse impacts were identified for the following resource areas:</p> <ul style="list-style-type: none"> <li>• Topography, Geology, and Soils</li> <li>• Noise</li> <li>• Ground Transportation</li> <li>• Natural Hazards</li> <li>• Visual Character / Loss of Open Space</li> </ul> <p>Potential short-term construction impacts would be mitigated to less than significant adverse impacts.</p>
No Impact	<p>No impacts were identified for the following resources and characteristics:</p> <ul style="list-style-type: none"> <li>• Climate and Rainfall</li> <li>• Water Resources</li> <li>• Air Quality</li> <li>• Biological Resources</li> <li>• Litter</li> <li>• Water and Wastewater Services</li> <li>• Communication Services</li> <li>• Emergency Services (Police and Medical)</li> <li>• Community Services and Facilities</li> <li>• Cultural Resources</li> <li>• Documented Scenic Views</li> </ul>
Unresolved Issues	None identified
Compatibility with Land Use Policies and Controls	
Proposed Land Use	Solid Waste Management/Waste Disposal and Processing Facility.
State Land Use District: Agricultural	Not a permissible use but meets the criteria for a Special Use Permit.
Zoning: General Agricultural District	Permissible use requiring a Conditional Use Permit – Major. Compatible with surrounding land uses.
Primary areas of compatibility:	<ul style="list-style-type: none"> <li>• Supports State renewable energy goals.</li> </ul>

PVT ISWMF Relocation  
Final Environmental Impact Statement

Project	PVT Integrated Solid Waste Management Facility Relocation
	<ul style="list-style-type: none"><li>• Direct, indirect and induced economic impacts on State, county and local community.</li><li>• Responsible waste management in accordance with solid waste management and other permits to protect the environment and human health.</li><li>• State and Oahu objectives for diverting waste from landfills through recycling and reuse.</li></ul>
Key Permits and Approvals	<ul style="list-style-type: none"><li>• State of Hawaii, Department of Health, Solid and Hazardous Waste Branch, Solid Waste Management Permit Modification.</li><li>• State of Hawaii, Department of Health, Clean Water Branch, National Pollutant Discharge Elimination System for Storm Water Associated with Industrial Activity NOI B Modification.</li><li>• State of Hawaii, Department of Health, Clean Air Branch, Noncovered Source Permit.</li><li>• State of Hawaii, Department of Health, Wastewater Branch, Individual Wastewater System Permit.</li><li>• State of Hawaii, Office of Planning, Land Use Commission, Special Use Permit.</li><li>• City and County of Honolulu, Planning Commission, Special Use Permit.</li><li>• City and County of Honolulu, Department of Planning and Permitting, Conditional Use Permit Major.</li></ul>



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## Acronyms and Abbreviations

°F	degrees Fahrenheit
AC	alternating current
ACM	asbestos containing material
ACS	American Community Surveys
AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance in the State of Hawaii
amsl	above mean sea level
AQI	Air Quality Index
AQIR	Air Quality Impact Report
BESI	Biomass Energy Systems, Inc.
bgs	below ground surface
BMPs	best management practices
BWS	Board of Water Supply
C&D	construction and demolition
CAB	Clean Air Branch
CCH	City and County of Honolulu
Ch.	chapter
CIA	Cultural Impact Assessment
CSH	Cultural Surveys Hawaii
CUP-Major	Conditional Use Permit-Major
CWA	Clean Water Act
CWB	Clean Water Branch
CWRM	Commission on Water Resource Management
CZM	Coastal Zone Management
dB	decibel
dBa	A-weighted decibel
DBEDT	Department of Business, Economic Development, and Tourism
DC	direct current
DHHL	Department of Hawaiian Home Lands
DLNR	Department of Land and Natural Resources
DOE	Department of Education
DPP	Department of Planning and Permitting
EAL	environmental action levels
EIS	environmental impact statement
EISPN	EIS preparation notice
ENV	CCH Department of Environmental Services
email	electronic mail
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency



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FHA	Federal Highway Administration
g	acceleration of gravity
GET	general excise tax
GIS	Geographic Information System
GHG	greenhouse gas
gpd	gallons per day
GPS	Global Positioning System
H-POWER	Honolulu Program of Waste Energy Recovery
HAR	Hawaii Administrative Rules
Hawaii Register	State of Hawaii Register of Historic Places
HDOH	Hawaii Department of Health
HDOT	Hawaii Department of Transportation
HECO	Hawaiian Electric Company, Inc.
HEER	Hazard Evaluation and Emergency Response
HEPA	Hawaii Environmental Policy Act
HFD	Honolulu Fire Department
HPD	Honolulu Police Department
HRS	Hawaii Revised Statutes
HWMO	Hawaii Wildfire Management Organization
IAL	Important Agricultural Land
IBR	induced bed reactor
ISO	International Standards Organization
ISWMF	Integrated Solid Waste Management Facility
IWS	individual wastewater system
KOP	Key Observation Point
kWh	kilowatt hour
kWh/m <sup>2</sup>	kilowatt hour per square meter
LA <sub>max</sub>	maximum operating noise levels
L <sub>eq</sub>	equivalent noise level
LCRS	leachate collection and removal system
LEED	Leadership in Energy and Environmental Design
LID	low impact development
LOS	Level of Service
LSB	Land Study Bureau
LUO	Land Use Ordinance
LUC	Land Use Commission
m <sup>2</sup>	square meter
MACLSS	Mayor's Advisory Committee on Landfill Selection
MCBH	Marine Corps Base Hawaii
MDL	method detection limit
mgd	million gallons per day
mg/L	milligrams per liter

µg/m <sup>3</sup>	micrograms per cubic meter
mph	miles per hour
MRD	materials recovery and diversion
MSW	municipal solid waste
MW	monitoring well
NAAQS	National Ambient Air Quality Standards
NGPC	Notice of General Permit Coverage
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWS	National Weather Service
OEQC	Office of Environmental Quality Control
OR&L	Oahu Railway & Land Company
OSHA	Occupational Safety and Health Administration
OWMP	Oahu Water Management Plan
PacIOOS	Pacific Island Ocean Observing System
PCB	polychlorinated biphenyl
PEL	permissible exposure limit
PER	Preliminary Engineering Report
PGA	peak ground acceleration
PM	particulate matter
PM10	respirable particulate matter less than or equal to 10 micrometers
PM2.5	respirable particulate matter less than or equal to 2.5 micrometers
ppb	parts per billion
ppm	parts per million
PRG	preliminary remediation goals
PV	photovoltaic
PVT	PVT Land Company, Ltd.
RCRA	Resource Conservation and Recovery Act
ROH	Revised Ordinances of Honolulu
RSL	regional screening levels
SAAQS	State Ambient Air Quality Standards
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Places
SMA	Special Management Area
SUP	Special Use Permits
SWANA	Solid Waste Association of North America
SWMP	Solid Waste Management Permit
SWPPP	stormwater pollution prevention plan
SY	sustainable yield
TIAR	Traffic Impact Analysis Report
TMC	The Traffic Management Consultant

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TMK	tax map key
TSP	total suspended particles
UIC	underground injection control
U.S.	United States
USDA	United States Department of Agriculture
USDL	United States Department of Labor Statistics
USFWS	United States Fish and Wildlife Service
WCEAR	Waianae Coast Emergency Access Road
WGSL	Waimanalo Gulch Sanitary Landfill
WOA	West Oahu Aggregate
WSCP	Waianae Sustainable Communities Plan
WWII	World War II
WWMP	Waianae Watershed Management Plan
WWTP	Wastewater Treatment Plant
ZVI	Zone of Visual Influence

# 1 INTRODUCTION

## Section Contents:

1.1 Project Background .....	1-4
1.2 Environmental Impact Review .....	1-4
1.3 Permits and Approvals .....	1-8

The following revisions were made to Section 1 of the Final Environmental Impact Statement (EIS) in response to comments on the Draft EIS.

Section	Page	Revisions
1.2.1	1-5	<p><b><u>1.2.1 EIS Preparation Notice and Stakeholder Outreach</u></b></p> <p><b><u>The EIS Preparation Notice (EISPN) was published in the State Environmental Notice on January 23, 2019 (<a href="http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-01-23-TEN.pdf">http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-01-23-TEN.pdf</a>). The public notice initiated a 30-day public review (scoping) period.</u></b></p> <p><b><u>The EISPN scoping period facilitates early identification of data gaps and public concerns to be addressed in the Draft EIS.</u></b></p> <p><b><u>The EISPN was distributed by United States (U.S.) Postal Service or electronic mail (email) to approximately 60 stakeholders including community groups, government agencies, and elected officials (see Appendix J, EISPN Distribution List). Written comments were received from 19 of the stakeholders consulted (See Section 9, Comments on the EISPN and Responses).</u></b></p> <p>Stakeholder outreach completed prior to the Draft EIS included:</p> <ul style="list-style-type: none"> <li>■ <del>Distribution of the EISPN by United States (U.S.) Postal Service or electronic mail (email) to approximately 60 stakeholders including community groups, government agencies, and elected officials (see Appendix J, EISPN Distribution List);</del></li> <li>■ <del>Presentation at a Nanakuli Neighborhood Board Meeting;</del></li> <li>■ <del>Presentation at a Puu Heleakala Community Association Meeting, the Puu Heleakala Community is located at the southeastern border of the Project Site;</del></li> <li>■ <del>PVT hosted community day for project stakeholders and community members to tour the PVT ISWMF site and learn about the Proposed Action;</del></li> <li>■ <del>Meetings with State and CCH agencies regarding permits and approvals required for the Proposed Action; and</del></li> </ul>

		<p>■—Modification of the PVT ISWMF website with a page dedicated to the Proposed Action that provides access to downloadable documents and project status (<a href="http://www.pvtland.com/EIS">http://www.pvtland.com/EIS</a>).</p> <p>Cultural Surveys Hawaii (CSH) performed additional outreach and community consultation in drafting the project-specific Cultural Impact Assessment (CIA). Details on their outreach efforts are provided in Section 5.2, <i>Cultural Resources</i> and Appendix H.</p>
1.2.2	1-5	<p><b><u>1.2.2. Draft EIS</u></b></p> <p><i><b><u>The Draft EIS was published in the July 23, 2019 issue of the State Environmental Notice (<a href="http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2019-07-23-OADEIS-PVT-ISWMF-Relocation.pdf">http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2019-07-23-OADEIS-PVT-ISWMF-Relocation.pdf</a>). The public notice initiated a 45-day public review period.</u></b></i></p> <p><i><b><u>Notice of the Draft EIS was sent to approximately 100 agencies, organizations, and individuals (see Appendix K, Draft EIS Distribution List). Written comments were received from 182 stakeholders (see Section 10, Comments on the Draft EIS and Responses).</u></b></i></p> <p><i><b><u>PVT received two petitions during the Draft EIS comment period, one in opposition to and one in support of the Proposed Action. These petitions are attached to the Final EIS as Appendix M and Appendix N, respectively.</u></b></i></p>
1.2.3	1-5	<p><b><u>1.2.3 Stakeholder Outreach</u></b></p> <p><i><b><u>PVT conducted the following outreach activities during the EIS process:</u></b></i></p> <ul style="list-style-type: none"> <li><i><b><u>Presented at the January 15, 2019 and July 16, 2019 Nanakuli Neighborhood Board Meetings;</u></b></i></li> <li><i><b><u>Attended the August 20, 2019 Nanakuli Neighborhood Board Meeting and September 4, 2019 Special meeting to hear testimony from 70+ individuals and organizations, both in favor of and opposed to the Draft EIS;</u></b></i></li> <li><i><b><u>Presented at a Puu Heleakala Community Association Meeting, the Puu Heleakala Community is located at the southeastern border of the Project Site;</u></b></i></li> <li><i><b><u>Hosted a community day for project stakeholders and community members to tour the PVT ISWMF site and learn about the Proposed Action;</u></b></i></li> <li><i><b><u>Met with State and CCH agencies regarding permits and approvals required for the Proposed Action; and</u></b></i></li> <li><i><b><u>Modified the PVT ISWMF website with a page dedicated to the Proposed Action that provides access to downloadable documents and project status (<a href="http://www.pvtland.com/EIS">http://www.pvtland.com/EIS</a>).</u></b></i></li> </ul> <p><i><b><u>Cultural Surveys Hawaii (CSH) performed additional outreach and community consultation in drafting the project-specific Cultural Impact Assessment (CIA). Details on their outreach efforts are provided in Section 5.2, Cultural Resources and Appendix H.</u></b></i></p>

		<b><u>Specific community feedback is discussed in Section 5.3.2.4, PVT ISWMF Social Characteristics.</u></b>
1.2.4	1-6	The Final EIS sections and technical reports are organized in <del>two</del> <b>three</b> volumes as listed in Table 1-1:
Table 1-1	1-6	<b><u>Section 10 Comments on the Draft EIS and Responses</u></b>  Section <del>10</del> <b>11</b> References  Appendix I Conceptual Landscaping Layout <b><u>Landscaping Plan</u></b>  <b><u>Appendix K Draft EIS Distribution List</u></b>  <b><u>Volume III. Appendices Continued</u></b>  <b><u>Appendix L City and County of Honolulu Landfill Siting Studies</u></b>  <b><u>Appendix M Petition in Opposition to the Proposed Action</u></b>  <b><u>Appendix N Petition in Support of the Proposed Action</u></b>
Figure 1-1	--	Correctly identified the area formerly owned by Tropic Land, LLC as owned by MA'O Organic Farms.

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## 1.1 Project Background

Established in 1992, the PVT Land Company, Ltd. (PVT) Integrated Solid Waste Management Facility (ISWMF) is the only commercial construction and demolition (C&D) landfill on Oahu.

PVT's current Solid Waste Management Permit (SWMP) authorizes a C&D landfill, C&D waste recycling and materials recovery operations, and renewable energy production for onsite use.

PVT, the Applicant, proposes improvements to its operations and relocation to provide adequate landfill capacity to accept future C&D waste generated on Oahu. The key components of the Proposed Action include:

- Relocation of C&D waste receiving, materials sorting/recycling, and C&D disposal operations.
- Relocation, modernization, and enhancement of recycling operations (e.g., installation of two materials recovery and diversion [MRD] process lines).
- Installation of renewable energy facilities to power PVT operations (e.g., gasification unit or anaerobic digestion system, and photovoltaic [PV] panels).

The existing PVT ISWMF is located on the west side of Lualualei Naval Road, in Nanakuli, Oahu. The Project Site for the Proposed Action is on the opposite (eastern) side of Lualualei Naval Road. The parcel, Tax Map Key [TMK] 8-7-009:007, is privately-owned and vacant (Figure 1-1). The owner of the property is Leeward Land Company, Ltd., an affiliate of PVT.

## 1.2 Environmental Impact Review

The Proposed Action includes a landfill; therefore, it triggers compliance with Hawaii Environmental Impact Statement (EIS) laws (Hawaii Revised Statutes [HRS] § 343-5 (9); Hawaii Administrative Rules [HAR] Chapter [Ch.] 11-200), collectively referred to as the Hawaii Environmental Policy Act.

Under the provisions of Act 172 (12), the approving agency, City and County of Honolulu (CCH), Department of Planning and Permitting (DPP), has determined at the outset that an EIS is required for the Proposed Action and PVT can proceed direct-to-EIS preparation notice, without preparing an Environmental Assessment.

### C&D Waste Characteristics:

- Consists primarily of inert building materials (i.e., glass, concrete, asphalt) and minimal organic waste, wood materials.
- Minimal odor generated due to low organic content.
- Low volume of methane gas generated due to low organic content.
- Not likely to be a litter nuisance, because the waste is heavy and bulky.
- Does not attract rodents, flies, or birds, because it is not a food source.

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### **1.2.1 EIS Preparation Notice**

The EIS Preparation Notice (EISPN) was published in the State Environmental Notice on January 23, 2019 ([http://oeqc2.doh.hawaii.gov/The\\_Environmental\\_Notice/2019-01-23-TEN.pdf](http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-01-23-TEN.pdf)). The public notice initiated a 30-day public review (scoping) period.

The EISPN scoping period facilitates early identification of data gaps and public concerns to be addressed in the Draft EIS.

The EISPN was distributed by United States (U.S.) Postal Service or electronic mail (email) to approximately 60 stakeholders including community groups, government agencies, and elected officials (see Appendix J, *EISPN Distribution List*). Written comments were received from 19 of the stakeholders consulted (See Section 9, *Comments on the EISPN and Responses*).

### **1.2.2 Draft EIS**

The Draft EIS was published in the July 23, 2019 issue of the State Environmental Notice ([http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2019-07-23-OADEIS-PVT-ISWMF-Relocation.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2019-07-23-OADEIS-PVT-ISWMF-Relocation.pdf)). The public notice initiated a 45-day public review period.

Notice of the Draft EIS was sent to approximately 100 agencies, organizations, and individuals (see Appendix K, *Draft EIS Distribution List*). Written comments were received from 182 stakeholders (see Section 10, *Comments on the Draft EIS and Responses*).

PVT received two petitions during the Draft EIS comment period, one in opposition to and one in support of the Proposed Action. These petitions are attached to the Final EIS as Appendix M and Appendix N, respectively.

### **1.2.3 Stakeholder Outreach**

PVT conducted the following outreach activities during the EIS process:

- Presented at the January 15, 2019 and July 16, 2019 Nanakuli Neighborhood Board Meetings;
- Attended the August 20, 2019 Nanakuli Neighborhood Board Meeting and September 4, 2019 Special meeting to hear testimony from 70+ individuals and organizations, both in favor of and opposed to the Draft EIS;
- Presented at a Puu Heleakala Community Association Meeting, the Puu Heleakala Community is located at the southeastern border of the Project Site;
- Hosted a community day for project stakeholders and community members to tour the PVT ISWMF site and learn about the Proposed Action;
- Met with State and CCH agencies regarding permits and approvals required for the Proposed Action; and
- Modified the PVT ISWMF website with a page dedicated to the Proposed Action that provides access to downloadable documents and project status (<http://www.pvtland.com/EIS>).



Cultural Surveys Hawaii (CSH) performed additional outreach and community consultation in drafting the project-specific *Cultural Impact Assessment* (CIA). Details on their outreach efforts are provided in Section 5.2, *Cultural Resources* and Appendix H.

Specific community feedback is discussed in Section 5.3.2.4, *PVT ISWMF Social Characteristics*.

### 1.2.4 Organization of the Final EIS

The Final EIS provides a description of the existing environment, potential impacts, proposed minimization and mitigation measures to lessen adverse impacts of the Proposed Action and the Alternatives. The Final EIS contains information from site visits, research, and technical reports prepared by discipline experts.

The Final EIS sections and technical reports are organized in three volumes as listed in Table 1-1:

**Table 1-1 Final EIS Sections and Appendices**

Volume I. Final EIS Sections	
Section 1	Introduction
Section 2	Proposed Action and Alternatives
Section 3	Natural Environment
Section 4	Public Infrastructure and Services
Section 5	Historic, Socioeconomic, and Scenic Resources
Section 6	Conformance with Land Use Plans, Policies, and Controls
Section 7	Other Impacts and Concerns
Section 8	Preparers
Section 9	Comments on the EISPN and Responses
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### 1.2.5 Types of Potential Impact

Section 3, *Natural Environment*; Section 4, *Public Infrastructure and Services*; and Section 5, *Historic, Socioeconomic, and Scenic Resources* describe the potential impacts of the Proposed Action and No Action Alternative on specific environmental and community resources.

Various types of impacts are described:

- **Short-term versus long-term impacts:** Indicates the impact duration. Short-term impacts may be related to a specific event (e.g., heavy rainfall) or phase of development (i.e., construction). Long-term impacts are generally associated with the operations phase, which, for the Proposed Action, begins with the acceptance of debris at the Project Site and continues after closure of the Proposed Action.
- **Direct versus indirect impacts:** Direct impacts are “cause and effect” types of impacts and tend to be easier to observe or measure. A direct impact occurs at the same time and same place as the action. Indirect impacts (or secondary impacts) are caused by the action and are later in time or further removed in distance, but still reasonably foreseeable (HAR § 11-200-2).
- **Other Impacts:** Other impacts, such as cumulative and irreversible impacts, are addressed in Section 7, *Other Impacts and Concerns*.

The approach to the individual resource impact analysis, in Sections 3, 4, and 5, is similar. Each resource section is organized as follows:

1. **Methodology:** describes methods and sources of information used to describe the resource and assess potential impacts.
2. **Existing Conditions:** describes baseline existing conditions of the resource.
3. **Impacts:** describes the potential impacts on the existing condition of the resource under the Proposed Action and No Action Alternative. The impacts are described relative to existing conditions as:
  - Beneficial impact;

- No impact or no change to existing conditions;
- Less than significant adverse impact; or
- Significant adverse impact. Mitigation may be proposed, as warranted.

4. Summary of Impacts and Potential Mitigation: provides a summary table of impacts with proposed additional mitigation measures, as warranted.

Most potential, significant adverse impacts have been anticipated by PVT based on their years of experience in the community. PVT is committed to minimizing these anticipated impacts through project design, construction, and operational BMPs. The Proposed Action would be implemented as described in Section 2, *Proposed Action and Alternatives*, including adherence to the site development plan, operations plan, construction controls, and permit conditions.

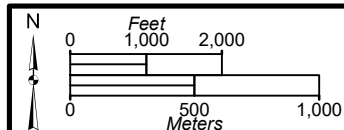
## 1.3 Permits and Approvals

Table 1-2 summarizes the permits and approvals anticipated for the Proposed Action.

**Table 1-2 Proposed Action Permits and Approvals**

State		
Department of Health, Solid and Hazardous Waste Branch	Solid Waste Management Permit	Modification of Existing Permit (Permit No. LF-0061-15)
Department of Health, Clean Water Branch	National Pollutant Discharge Elimination System Discharges Associated with Industrial Activity NOI B	Modification of Existing Permit (Permit No. HI R50B941)
Department of Health, Clean Air Branch	Noncovered Source Permit	New Permits
Department of Health, Wastewater Branch	Individual Wastewater System Permit	New Permits
Office of Planning, Land Use Commission	Special Use Permit	New Permit
City and County of Honolulu		
Department of Planning and Permitting	Building Permits, including permits for electrical or plumbing work	New Permits
Department of Planning and Permitting	Conditional Use Permit Major	New Permit
Planning Commission	Special Use Permit	New Permit

Date Saved: 10/13/2019 7:35:51 AM Document Path: F:\Hawaii\GIS\Projects\PVT\FEIS Figure 1-1 Location Map\_191004.mxd



Source: DPP 2017. Aerial photograph provided by Hexagon Imagery Program Data.

Figure  
1-1

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## 2 PROPOSED ACTION AND ALTERNATIVES

### Section Contents

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2.7	Alternatives to the Proposed Action .....	2-40

The following revisions were made to Section 2 in the Final EIS in response to the Draft EIS comments.

Section	Page	Revisions
2.2.1	2-6	The CCH relies on PVT to meet the Federal, State, and CCH requirements for C&D solid waste management over the 25-year planning horizon ( <i>Jacobs 2019</i> , CCH 2017, <i>R.W. Beck</i> CCH 2008). PVT ISWMF also serves as the disposal site for emergency disaster debris (CCH 2017).
2.3	2-8	The Project Site (Figure 2-2 and photo inset) is largely undeveloped, apart from unpaved roads/paths, <del>one</del> <b>two</b> non-potable brackish industrial supply wells (PW-1 <b>and North Well</b> ), one PVT groundwater monitoring well (MW-3), and two 25,000-gallon non-potable brackish water storage tanks, all of which are used for operations at the PVT ISWMF. <del>An active</del> <b>44</b> 46-kilovolt overhead power line crosses the southern portion of the Project Site.
2.4.5	2-14	When all disposal capacity has been exhausted, PVT would close and install final cover on all areas of the C&D landfill. <b><u>It is anticipated that the landfill will reach capacity in approximately 7-12 years, depending on the economy and construction industry. In an emergency, hurricane, or other natural disaster, a large quantity of debris could be accepted and landfilled, which would shorten the life of the landfill.</u></b>
2.4.5	2-14	PVT is responsible for <b><u>up to 30 years of</u></b> post-closure care of the Phases I/II landfill.
2.4.5	2-14	The closed PVT ISWMF would be maintained as open space during the post-closure period. The existing administrative office would be maintained <del>as a</del> <b>headquarter</b> for managing post-closure activities. <b><u>Accessory facilities necessary for post-closure monitoring and site security include: electrical equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F)</u></b>

		<p><u>and discharge points, water tanks, and wells (See Figure 2-2, Existing Conditions). PVT would retain the right to construct a 2-acre PV system and/or a gasification unit.</u></p> <p>PVT would continue to work with the community at the time of closure to explore potential post-closure land use options for the closed ISWMF. <u>PVT will engage the community through the neighborhood board process. The PVT ISWMF site is and will remain private land. PVT's SWMP and Closure Plan restrict site access for public safety and to safeguard the integrity of the landfill cap and landfill monitoring systems.</u></p>
2.5.1	2-15	<p>When all disposal capacity has been exhausted, PVT would close their existing facility and install final cover on all areas of the C&amp;D landfill, as described in Section 2.4.5, <i>Closure of PVT ISWMF C&amp;D Landfill</i>. <u>Facilities and operations which are required for the support of post-closure maintenance activities would remain on the site and include: administrative office, electrical equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F) and discharge points, water tanks, and wells.</u></p> <p><u>Some equipment and operations would remain on the PVT ISWMF site to support the Proposed Action, including the equipment maintenance facility, MRD-1, scale house, and scales (See Figure 2-3 and Description of Major Operational Areas and Structures in Site Development Plan). These back-up systems are necessary for the continuity of PVT operations in the event of an emergency or natural disaster. PVT would retain the right to construct a 2-acre PV system and/or a gasification unit on the existing site in their efforts to reach energy independence.</u></p>
2.5.6.2	2-30	<p>Non-potable water would be withdrawn from two <u>existing</u> wells on the Project Site (<u>PW-1 (Well 2308-03) and North Well (Well 2408-11)</u>) (Figure 2-9). <u>PW-1 is located in a basal, unconfined dike aquifer (Aquifer Code 30302112). The aquifer is classified as not ecologically important and replaceable (Mink and Lau, 1990). PVT's North Well is in the upper, basal, unconfined, sedimentary caprock aquifer (Aquifer Code 30302116). The aquifer is classified as not ecologically important and irreplaceable (Mink and Lau, 1990). Both aquifers have moderate salinity with chloride concentrations between 1,000 and 5,000 mg/l and are not a source for drinking water.</u> The brackish water would be pumped into the two existing and two planned aboveground tanks located near the wells (Figure 2-9). Non-potable water would be used as the primary method of dust control.</p> <p>Water usage from the wells is permitted up to a maximum of 288,000 gallons per day (gpd) <u>per well</u>, and usage is documented with meters installed on the output</p>

		<p>of the wells (Department of Land and Natural Resources [DLNR] <del>Well No: 2308-04</del> <b>Well No: 2308-03 and Well No: 2408-11</b>). <b><u>The aquifers' sustainable yields and pumpage were considered in issuing the permits. PVT does not propose to increase the permitted usage.</u></b> Current water usage is approximately 100,000 GPD. Operational controls to minimize water use would include vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (i.e., portions of the materials recovery areas).</p> <p><b><u>When there is no future use for the wells at the PVT ISWMF and Project Site, the wells will be properly abandoned and sealed. Permits from the Commission will be obtained prior to any sealing work.</u></b></p>
2.5.6.3	2-31	<p>The proposed connection point to the HECO infrastructure on Lualualei Naval Road is shown on Figure 2-9. The onsite lines will be underground. A <del>44</del> <b>46</b>-kilovolt power line, reported to be currently <del>unused</del> <b>in use</b>, crosses the southern portion of the Project Site. PVT would coordinate with HECO to relocate this line to the southeast boundary of the Project Site (Figure 2-9). <b><u>Relocation of the line may require approval from the Public Utilities Commission.</u></b></p>
2.5.6.5	2-34	<p><b><u>The Federal Fire Department also provides services to the Project Site.</u></b></p>
2.5.7.2	2-36	<p>■ Periodically sweep Lualualei Naval Road between the intersection of Farrington Highway and the PVT entrance <b><u>and the concrete channel</u></b> with PVT's commercial street sweeper.</p>
2.5.7.5	2-36	<p>2.5.7.5 Explosive <b><u>and Landfill</u></b> Gas Control</p> <p><b><u>PVT has a landfill gas monitoring and management program, which would be updated and implemented as part of the Proposed Action. Steel gas probes are strategically placed around the landfill as needed for gas monitoring and carbon dioxide injection. Landfill gases are produced when bacteria break down organic waste. The rate and volume of landfill gases generated by decomposition of C&amp;D debris is extremely low compared to MSW landfills. C&amp;D landfills do not generate measurable quantities of methane. The organic material in C&amp;D debris is limited primarily to wood and clearing and grubbing debris, which decays slowly. At the PVT ISWMF, organic materials are removed to the extent practical and recycled as feedstock for energy providers. Because of the lack of C&amp;D landfill gases, PVT injects and sequesters carbon dioxide gas in the landfill. The carbon dioxide gas drives out oxygen, minimizing fire potential and generation of odorous gases. C&amp;D landfills do not generate measurable quantities of methane. The rate and volume of methane gas generated by decomposition of C&amp;D waste is extremely low. The organic material</u></b></p>



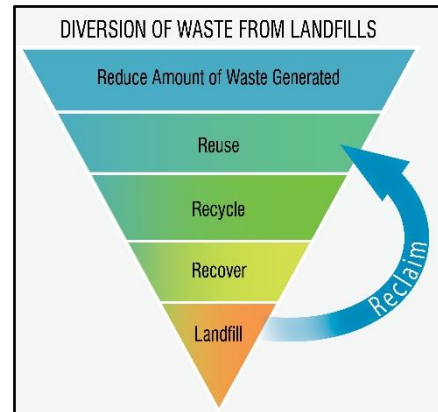
		in the debris is limited primarily to wood and clearing and grubbing debris, which decay slowly.
2.5.7.7	2-37	<u><b>PVT closes the facility and ceases operations when wind speeds exceed 40 miles per hour.</b></u>
2.7.1.1	2-40	<p><u><b>PVT considered several design alternatives in the development of the Proposed Action. The Proposed Action was designed to minimize visual, noise, and dust impacts on the residential communities located south of the Project Site. The selected design has proven effective in mitigating potential impacts based on prevailing wind, terrain, technology, and years of operational BMPs at the existing PVT ISWMF. Alternative designs considered and dismissed include:</b></u></p> <ul style="list-style-type: none"> <li>■ <u><b>Increasing the maximum landfill elevation – The maximum landfill grade would be 255 feet amsl with the highest grades located in the northeastern portion of the Project Site (Figure 2-4). The 255 feet amsl limit is consistent with the existing PVT landfill and would minimize visual impacts to the surrounding community and culturally important viewplanes (e.g. Hina’s Cave).</b></u></li> <li>■ <u><b>Locating the site entrance / exit further into Lualualei Naval Road – The Project Site entrance / exit would be located directly across from the PVT ISWMF site entrance/exit (Figure 2-3). Access is permitted by PVT’s lease with the U.S. Navy. PVT considered siting the entrance further north on Lualualei Naval Road. However, this option was dismissed because renegotiating their lease with the U.S. Navy would take several years. The Proposed Action would not be constructed prior to the closure of the PVT ISWMF. Delays in the Proposed Action would ultimately be borne by the construction industry.</b></u></li> <li>■ <u><b>Increasing the size of the buffer zone – PVT would maintain a 750-foot buffer zone between the nearest residential area (located south of the Project Site) and the active disposal area (beginning with Cell 10) of the Project Site. A 750-foot setback was selected to be consistent with PVT’s existing SWMP, minimize impacts to surrounding land uses, and maximize the use of the available land area. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. As described in Section 6.3.2.3, the 750-foot buffer complies with the CCH LUO (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and increasing the size of the buffer zone would not result in less environmental impact. Resource experts analyzed the impacts of the Proposed Action on air quality (Appendix B and C), noise (Appendix D), and traffic (Appendix F) and incorporated the 750-buffer zone in their models/analysis. Each study determined that the Proposed</b></u></li> </ul>

		<p><u>Action would have no significant impact on the studied resource.</u></p> <p><u>Increasing the size of the buffer zone would decrease the lifespan of the facility, meaning the CCH will have to site and construct another landfill sooner.</u></p> <p>■ <u>Alternative designs for the stormwater basin – The stormwater basin was sized to manage runoff from a 25-year, 24-hour storm, as required by the solid waste regulations (HAR § 11-58.1-15(g)). The design includes LID hydrologic design strategies and BMPs to limit, convey, and retain peak stormwater flows on site. Astroturf will cover the stormwater basins to reduce dust generation and so that the stormwater basin visually looks like a large field (i.e. minimize visual impacts). Astroturf was selected over landscaping in the basins because the lack of potable water on the site for irrigation and ease of maintenance.</u></p>
2.7.1.3	2-42	The CCH Department of Environmental Services (ENV) published two recent landfill siting studies ( <u>Appendix L</u> ):
2.7.1.3	2-44	The EIS team evaluated the 11 sites studied by the CCH to determine their availability and suitability for use as a C&D ISWMF. Each site was screened based on <u>the information provided in the CCH studies and</u> the following criterion <u>additional criteria</u> , as summarized in Table 2-7:
Figure 2-2	---	Add callouts for <u>Electric Equipment</u> , <u>Leachate Sump</u> , and <u>Existing Dwelling</u> .
Figure 2-3 Description of Major Operational Areas and Structures Identified on the Site Development Plan	---	<p>Employee Breakroom <u>and Offices: Combined office / employee break room trailers. One is located in the north/MRD area and one is located in the south area.</u> Temporary, covered area with tables for use by the employees during breaks and lunch.</p> <p>Office Trailers: Temporary office trailers located in the north/MRD area and in the south area.</p> <p>Scale House <u>and Offices:</u></p> <p>Water Tanks <u>and Reverse Osmosis Unit:</u> Containers for storing non-potable water used for dust control. <u>Location of a reverse osmosis unit to convert non-potable, brackish well water into potable water.</u></p>
Figure 2-9	---	<p>Added Callout for Water Tanks <u>and Reverse Osmosis Unit.</u></p> <p>Revised erroneous callout to <u>North Well (Well 2408-11).</u></p>

## 2.1 Diverting Waste from Landfills

The first priority of waste management programs is to reduce the volume of waste generated. The next priority is to divert as much waste from landfills as possible through reuse, recycling, and recovery of various types of waste. There are many reasons to minimize the use of landfills. They are difficult to site and are expensive to design, develop, and operate in accordance with applicable permits.

Figure 2-1 shows the C&D debris management process, beginning at generation from construction projects to acceptance at PVT ISWMF.



Project designers and engineers are motivated to divert C&D debris from landfills in order to qualify for Leadership in Energy and Environmental Design (LEED) credit. PVT provides documentation of the diverted materials. Contractors are encouraged to segregate and sort materials at the job site to the extent practical. However, it is challenging to recycle at construction sites due to lack of space and equipment for sorting and processing.

Both segregated and mixed C&D debris are accepted by PVT. Initially, in the 1990's, 100% of the C&D waste received at PVT was landfilled. Today, the PVT facility is not just a landfill, it is an Integrated Solid Waste Management Facility, meaning it reduces the volume of waste that needs to be landfilled onsite. Approximately 80% of the C&D debris currently received at PVT ISWMF is reused or recycled using state-of-the-art materials sorting equipment. PVT is the State's largest recycler by weight.

To further increase capacity at the existing landfill, PVT has systematically excavated (i.e., reclaimed) the older landfilled waste. The waste is processed through the current sorting and recycling procedures, which has reduced the amount of waste that was returned to the landfill. The result is more landfill capacity for new waste in the older landfill cells.

## 2.2 Purpose and Need for the Proposed Action

### 2.2.1 Need

PVT operates the only commercial C&D waste management facility on Oahu that is available for public use. The PVT ISWMF generates revenue for the State and the CCH. It is privately owned and operated at no cost to taxpayers. PVT plays a vital role in Oahu's construction industry and in the State's economy.

The CCH relies on PVT to meet the Federal, State, and CCH requirements for C&D solid waste management over the 25-year planning horizon (Jacobs 2019, CCH 2017, R.W. Beck 2008). PVT ISWMF also serves as the disposal site for emergency disaster debris (CCH 2017).

Although PVT's waste diversion and reclamation practices have extended the life of the C&D landfill, the ongoing construction boom on Oahu has generated larger volumes of C&D debris over a longer period than anticipated. PVT has exhausted all site planning and permitting opportunities (i.e., expanded recycling efforts, vertical expansion, horizontal expansion) to increase capacity at the PVT ISWMF. PVT is initiating closure activities at the PVT ISWMF, in accordance with their Solid Waste Management Permit (SWMP).

The closure of the PVT ISWMF would leave Oahu without a commercial C&D landfill. The CCH would need to modify their integrated solid waste management plans and identify an alternative C&D disposal site.

### **2.2.2 Purpose**

The purpose of the Proposed Action is for PVT to continue to provide uninterrupted C&D waste management services for Oahu at a site that is feasible for PVT.

The Project Site is feasible, based on several characteristics including:

- Ownership of property;
- Vacant land;
- Sufficient developable area;
- Located next to existing PVT ISWMF operations, maximizing operational efficiency at both sites; and
- Minimal engineering and site development constraints.

Section 2.7, *Alternatives to the Proposed Action*, discusses alternative sites for the Proposed Action, including potential landfill locations identified by the CCH.

### **2.2.3 Objectives**

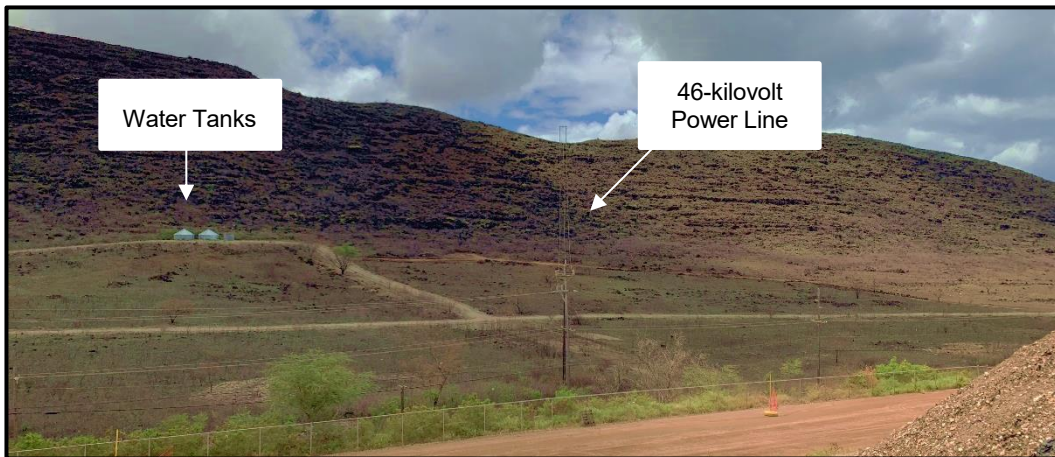
The objectives of the Proposed Action are to continue to:

- Provide Oahu with critical landfill capacity for C&D waste disposal to support the construction industry and disaster preparedness;
- Divert C&D debris from landfill disposal through reuse, recycling, and reclamation, thereby maximizing the operational life of the landfill;
- Generate feedstock from the C&D debris to be used as an alternative fuel by energy producers; supporting the CCH and State goals for alternative energy sources and reducing Hawaii's reliance on fossil fuels;
- Use renewable energy to power onsite operations; and

- Operate the PVT ISWMF in a manner that:
  - is compatible with surrounding land uses;
  - respects and supports the community;
  - complies with all permit and approval requirements; and
  - is fiscally and environmentally responsible.

## 2.3 Project Site Characteristics

The Project Site is in Nanakuli, Waianae District of Oahu, Hawaii (Figure 1-1). The 179-acre parcel (TMK 8-7-009:007) is owned by Leeward Land Company, Ltd., a company affiliated with PVT. It is located directly east of the existing PVT ISWMF. Both the Project Site and PVT ISWMF are accessible from Lualualei Naval Road.



*Southern portion of the Project Site.*

The Project Site (Figure 2-2 and photo inset) is largely undeveloped, apart from unpaved roads/paths, two non-potable brackish industrial supply wells (PW-1 and North Well), one PVT groundwater monitoring well (MW-3), and two 25,000-gallon non-potable brackish water storage tanks, all of which are used for operations at the PVT ISWMF. An active 46-kilovolt overhead power line crosses the southern portion of the Project Site.

The Project Site's neighboring properties (Figure 1-1) include the following:

- **North and East:** Undeveloped and naturally vegetated Puu Heleakala (TMK 8-7-009:001). The slope is steep, with a peak elevation of 1,890 feet above mean sea level (amsl). The ridgeline forms the boundary between Lualualei and the Nanakuli Ahupuaa. Most of the parcel is designated for Conservation by the State.
- **South:** Residential developments of the Lualualei/Nanakuli community.

- **West:** Lualualei Naval Road delineates the western boundary. Further west is the PVT ISWMF (TMK 8-7-009:025 and 8-7-021:026) and West Oahu Aggregate industrial facility (TMK 8-7-021:035).

Section 6 summarizes the Proposed Action's Conformance with Land Use Plans, Policies, and Controls. The key land use characteristics of the Project Site are:

- State Agricultural District (State Land Use Law, HRS Ch. 205).
- CCH Agricultural District, specifically AG-2 General Agricultural District (Revised Ordinances of Honolulu [ROH] § 21-3).
- Outside of the CCH-designated Special Management Area (SMA) (ROH Chapter 25).

The history of the Project Site and its uses are described in Section 5.1 *Archaeological and Historical Resources*.

## 2.4 Existing PVT ISWMF Operations

PVT has successfully operated the PVT ISWMF in accordance with its SWMP, No. LF-0061-15 (HDOH 2018a). The PVT *Operations Plan*, approved in the SWMP, describes PVT's proven methods for environmental protection and operations. Many of the PVT ISWMF operations, as seen in Figure 2-2, would relocate to the Project Site and would be similarly managed (see Section 2.5.1, *Proposed Uses and Activities*). The PVT *Operations Plan* would be updated to reflect the Proposed Action. The following description of the existing PVT ISWMF is based on the current PVT ISWMF SWMP (No. LF-0061-15) and the approved PVT *Operations Plan* (HDOH 2018a).

### 2.4.1 PVT ISWMF Materials Acceptance and Disposal

#### 2.4.1.1 Excluded Wastes

The facility does not accept municipal solid waste (MSW), industrial waste, regulated hazardous waste, Toxic Substances Control Act-regulated polychlorinated biphenyl (PCB) contaminated materials, radioactive waste, or infectious waste, as defined by State regulations.

#### 2.4.1.2 Accepted Material

PVT ISWMF accepts the following types of material, per its SWMP:

- C&D debris (up to 3,000 tons per day);
- Source-separated materials for recycling or renewable energy, including wood, plastic, furniture, and mattresses;
- Asbestos-containing material (ACM) (double-bagged, up to 500 tons per week). Location of ACM is recorded and tracked using survey-quality Global Positioning System (GPS) technology;
- Liquid wastes for solidification with soil, coal ash, and feedstock ash;

- Contaminated soil (e.g., petroleum contaminated soils) for disposal or use in solidification of liquid wastes;
- Scrap metal and concrete, rock, and asphalt rubble; and
- Coal ash and feedstock ash accepted for Hawaii Department of Health (HDOH) approved beneficial uses as follows, but not for disposal in the landfill:
  - Operations Layer – Used as a substitute for soil in the protective soil layer placed above newly installed liner systems in new disposal cells.
  - Fire barrier – Placed as a subsurface barrier between or within disposal cells to limit the spread of subsurface fires and minimize potential damage to the landfill liner systems.
  - Void Space Filling – Used for fire prevention.

Also, in the event of a natural disaster, C&D debris would be taken to the PVT ISWMF for processing and/or disposal (CCH 2017).

#### **2.4.1.3 General Procedures for Waste Acceptance**

All C&D customers are subject to PVT ISWMF prequalification procedures and must adhere to the PVT disposal agreement and applicable CCH, State, and Federal laws. PVT prequalifies all customers by requiring establishment of an approved account prior to delivering any material to the ISWMF. Special accounts and review procedures are required for customers proposing to dispose of contaminated soils, ACM, or liquid wastes for solidification.

PVT requires testing for several categories of C&D waste, including debris containing lead paint, sand blast sand, and soil. Additionally, fiberglass or steel waste storage tanks proposed for disposal must be certified clean by a qualified environmental contractor. Customers are required to submit test results and certifications for these materials before PVT accepts the waste.

When waste transporters arrive at the scale house, the load and paperwork is inspected to determine if it can be accepted per the SWMP. If acceptable, the waste is weighed, and the customer is directed to the appropriate processing or disposal area.

The PVT ISWMF segregates incoming loads into materials for processing, recycling, on-site usage, or landfill disposal.

#### **2.4.1.4 C&D Landfill Design**

Approximately 104 acres of the 200-acre PVT ISWMF property are designated for waste disposal. The landfill was designed and developed in two phases. Phase I is 49 acres and was filled first (Figure 2-2), prior to the current recycling and recovery activities.

Phase II is 55 acres. The Phase II cells and composite liner systems exceed the requirements of applicable State C&D landfill regulations.



## **2.4.2 Recycling and Materials Recovery and Diversion Operations**

In addition to specifying the acceptable wastes, the SWMP allows the storage of recyclable materials and describes three processes PVT can use to divert C&D debris from the landfill.

### **2.4.2.1 Materials Recovery and Diversion**

The 6-acre Materials Recovery and Diversion (MRD) area is the designated area for sorting the incoming mixed debris to recover recyclable materials (Figure 2-2 and photo below). This is accomplished using stationary equipment and an organized process line. PVT ISWMF operates one system or process line, referred to as MRD-1. The MRD-1 is operated 8 hours per day and processes approximately 70 tons per hour.



*PVT ISWMF MRD-1.*

In addition, the MRD-1 generates feedstock, another SWMP permitted activity. Feedstock is a mixture of wood, plastic, paper, and other organic materials that are suitable for bioconversion/gasification and production of renewable energy.

### **2.4.2.2 Landfill Reclamation**

PVT is authorized by its SWMP to reclaim portions of the C&D landfill (Phase I) (Figure 2-2) to:

- Remove previously buried waste;
- Process the excavated waste to recover recyclable materials; and
- Return unrecyclable waste to the landfill.

This ongoing operation provides several benefits, including:

- Recover metals, materials for aggregate production, and materials for feedstock production;
- Recover and reuse excess soil used in the original landfill operation;



- Replace loosely compacted waste in the landfill using current compaction methods which yields three times better compaction, thereby minimizing void spaces, minimizing long-term settlement issues, and reducing risk of subsurface fires; and
- Extend the useful life of the landfill.

#### **2.4.2.3 Aggregate Materials Processing**

An area of the existing PVT ISWMF is dedicated to Aggregate Materials Processing (Figure 2-2). PVT processes rock, concrete, and asphalt rubble to produce crushed aggregate materials for use in permanent and temporary landfill construction. Primary sources of these materials are land clearing and excavation, building demolition, and road/highway construction and maintenance.

### **2.4.3 Renewable Energy Production**

PVT's SWMP allows renewable energy production through the use of PV panels and a gasification unit.

#### **2.4.3.1 Photovoltaic Power Generation**

PVT has installed PV modules on structures over portions of the office parking area to offset power requirements for the office facilities. An additional 2 acres of PV is permitted at one of two sites:

- Phase II, Cell 9 area of the landfill (Figure 2-2).
- Southeast-facing slopes of the Phase I landfill, along Lualualei Naval Road, after completion of final cover in this area.

#### **2.4.3.2 Gasification Unit**

A gasification unit is permitted in the MRD Area along the northern boundary of the existing ISWMF property adjacent to MRD-1 (Figure 2-2). It would utilize feedstock generated onsite at the MRD. The gasification unit would convert approximately 8 tons of feedstock per day into a syngas (synthesis fuel gas) that is combusted to generate approximately 300 kilowatt hours (kWh) of electricity. The unit would also produce about 0.16 tons of feedstock ash per day that would be beneficially used in the landfill, per the SWMP.

Currently, the additional PV modules and the gasification unit have not been constructed at the PVT ISWMF.

### **2.4.4 Peer Review of PVT ISWMF Operations**

At the national level, PVT was awarded the Solid Waste Association of North America (SWANA) Gold Excellence Award in the Landfill Management category in 2018 (SWANA 2018).

SWANA's Excellence Awards Program recognizes outstanding solid waste programs and facilities that advance the practice of environmentally and economically sound solid waste management. This is demonstrated through their commitment to using effective technologies and processes in system design and operations, advancing worker and community health and safety, and implementing successful public education and outreach programs. Programs also must demonstrate that they are fiscally and environmentally responsible through their compliance with applicable Federal, State, and Local regulations.

PVT ISWMF characteristics that contributed to the award included:

- Landfill Design: Constructed and operated based on MSW and special waste design standards that exceed the standard practice and regulatory requirements for C&D landfills.
- Critical role in the CCH's Integrated Solid Waste Management Plan: Designated disposal point for special waste, emergency waste (natural disasters), and C&D waste (Jacobs 2019).
- Innovation: 1) use of GPS to track the location of special waste within an inch of accuracy; and 2) use of drones with infrared cameras for early detection of subsurface temperature increases, "hotspots," indicative of potential for fire that can be avoided by injecting carbon dioxide into the hotspot.
- Waste minimization: PVT is the State's largest recycler.
- Employee health and safety: Training and wellness programs; safety systems and protocols; excellent safety record.
- Stormwater Management: Infrastructure to contain a 100-year flood.
- Public Outreach Program: 1) scholarship program; 2) financial support of community events, education programs, sports teams, and public services; 3) monthly "newsletter" in local paper; 4) responsiveness to community concerns (e.g., host a complaint "hotline"); and 5) group and individual tours of the facility.
- Aesthetics: 1) Buffer and extensive landscaping at the entrance and perimeter; 2) worked with the community to landscape access road shoulder areas outside the property with native plants; 3) designated area for cultivating landscape plants and trees; and 4) landscape inactive landfill cells.



### **2.4.5 Closure of PVT ISWMF C&D Landfill**

As described in Section 2.2, *Purpose and Need for the Proposed Action*, the existing PVT ISWMF C&D landfill Phases I and II are nearing capacity and closure activities are beginning in accordance with the HDOH-approved PVT Closure/Post-Closure Plan, per its SWMP (HDOH 2018a). The airspace would be maximized at the PVT ISWMF facility before utilizing the Project Site.

As areas of the landfill incrementally reach final grades, PVT is constructing final cover in these areas, first on the perimeter slopes then on the top deck areas. PVT has initiated construction of final cover over two portions of the landfill that have achieved final grades. As additional cells of the landfill approach final grades, PVT will provide HDOH written notice of intent to initiate closure activities. When all disposal capacity has been exhausted, PVT would close and install final cover on all areas of the C&D landfill. It is anticipated that the landfill will reach capacity in approximately 7-12 years, depending on the economy and construction industry. In an emergency, hurricane, or other natural disaster, a large quantity of debris could be accepted and landfilled, which would shorten the life of the landfill.

Due to the declining quantities of incoming ACM for disposal, PVT anticipates that the ACM disposal area located within the Phase I area of the landfill would not reach capacity at the same time as the rest of the landfill. The ACM area would remain open until final grades within this area are achieved, at which time PVT would no longer accept ACM.

PVT is responsible for up to 30 years of post-closure care of the Phases I/II landfill. Post-closure activities include monitoring and maintenance of the landfill final cover and stormwater management systems, leachate collection and removal system (LCRS) operation, and groundwater monitoring. The HDOH requires that the integrity of the landfill cover be maintained during the post-closure period. Vegetative growth that may penetrate the cover is not permitted on the closed landfill.

The closed PVT ISWMF would be maintained as open space during the post-closure period. The existing administrative office would be maintained for managing post-closure activities. Accessory facilities necessary for post-closure monitoring and site security include: electrical equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F) and discharge points, water tanks, and wells (See Figure 2-2, *Existing Conditions*). PVT would retain the right to construct a 2-acre PV system and/or a gasification unit.

PVT would continue to work with the community at the time of closure to explore potential post-closure land use options for the closed ISWMF. PVT will engage the community through the neighborhood board process. The PVT ISWMF site is and will remain private land. PVT's SWMP and *Closure Plan* restrict site access for public safety and to safeguard the integrity of the landfill cap and landfill monitoring systems.

## 2.5 Description of the Proposed Action

### 2.5.1 Proposed Uses and Activities

PVT proposes to 1) relocate its C&D debris receiving, recycling, and disposal operation to the project site, 2) upgrade its recycling operations by installing two materials recovery and processing lines, and 3) install renewable energy facilities (an enclosed gasification unit or anaerobic digestion system and photovoltaic panels) to power its operations. The proposed permitted materials and activities would be similar to the existing PVT ISWMF, described in Section 2.4, *Existing PVT ISWMF Operations*, subject to an updated SWMP. Table 2-1 summarizes the permitted materials and activities of the PVT ISWMF and which activities would be relocated under the Proposed Action. The timeline for the Proposed Action is presented in Section 2.6.1, *Site Development and Relocation Schedule*.

PVT would continue to accept C&D materials as described in Section 2.4.1, *PVT ISWMF Materials Acceptance and Disposal*. PVT is permitted by their SWMP to accept up to 3,000 tons of C&D debris per day; PVT does not propose to increase this limit or accept new types of wastes. C&D acceptance and disposal would cease at the PVT ISWMF when the Phase I and II landfill reaches capacity. Due to the declining quantities of incoming ACM for disposal, no ACM disposal area is proposed for the Proposed Action. The ACM disposal area at the current facility would remain open until final grades within this area are achieved, at which time PVT would no longer accept ACM.

PVT would relocate its MRD operations to the Project Site, including materials segregation and sorting, aggregate materials production, feedstock processing, and storage of recyclable materials. Two new MRD units, MRD-2 and MRD-3, would be installed to sort debris, separate recyclables, and generate feedstock for renewable energy providers. MRD-1 would remain at PVT ISWMF to be used during periods when MRD-2 or MRD-3 are not operational due to maintenance, repair, or during emergency disaster operations. MRD operations would cease at the PVT ISWMF once relocated to the Project Site.

PVT proposes to install a gasification unit or anaerobic digestion system, and a PV system to generate renewable energy. PVT may install the currently permitted gasification unit or 2-acre PV system at the existing PVT ISWMF. Renewable energy generated by PVT would be used on site to power the office trailers and MRD units.

The Project Site would continue to be used as the primary debris management site in the event of a large-scale disaster. As the Project Site is developed, operations would be staged so disaster debris can be accepted in an emergency.

When all disposal capacity has been exhausted, PVT would close their existing facility and install final cover on all areas of the C&D landfill, as described in Section 2.4.5, *Closure of PVT ISWMF C&D Landfill*. Facilities and operations which are required for the support of post-closure maintenance activities would remain on the site and include: administrative office, electrical

equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F) and discharge points, water tanks, and wells.

Some equipment and operations would remain on the PVT ISWMF site to support the Proposed Action, including the equipment maintenance facility, MRD-1, scale house, and scales (See Figure 2-3 and *Description of Major Operational Areas and Structures in Site Development Plan*). These back-up systems are necessary for the continuity of PVT operations in the event of an emergency or natural disaster. PVT would retain the right to construct a 2-acre PV system and/or a gasification unit on the existing site in their efforts to reach energy independence.

The PVT ISWMF and Proposed Action would be self-contained and autonomous once relocation is complete.

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**Table 2-1 Proposed Permitted Materials and Activities**

	PVT ISWMF	Project Site
<b>Material Accepted</b>		
C&D waste	Operations cease when Phase I and II meet capacity	Relocate operations for new waste
Source-separated materials	Operations cease	Relocate operations for new materials
ACM	Operations cease when ACM area reaches capacity	None proposed
Liquid waste for solidification	Operations cease	Relocate operations for new waste
Pre-approved contaminated soil	Operations cease	Relocate operations for new waste
Scrap metal, concrete, rock, and asphalt rubble	Operations cease	Relocate operations for new materials
Coal ash and feedstock ash for beneficial use only	Operations cease	Relocate operations for new ash for beneficial use
<b>Activity</b>		
Segregation of incoming loads into materials for processing, recycling, on-site usage, or disposal	Operations cease	Relocate operations for new materials
MRD process lines	MRD-1, retained as backup	2 new: MRD-2 and MRD-3
Production of aggregate materials including rock, gravel and crushed asphalt	Operations cease	Relocate operations for new materials
Material processing to produce feedstock for renewable energy processes	Operations cease	Relocate operations for new materials
Reclamation of previously landfilled C&D waste	Cease when Phase I reclamation is completed	Retain capability to: 1) temporarily landfill and reclaim materials accepted during a natural disaster that cannot be processed immediately; 2) reclaim landfilled waste if it is determined to be recyclable in the future
Storage of recyclable materials	Cease with landfill closure	Relocate operation
PV power generation	2 acres, approved but not installed. Reserve 2 acres for PV	7 acres at the Project Site
Operation of a gasification unit or anaerobic digestion system to produce renewable energy	Gasification unit approved but has not been installed	New gasification unit or anaerobic digestion system
CCH Emergency Disaster Debris Management	Cease with landfill closure	Relocate

## **2.5.2 Site Development Plan**

Figure 2-3 presents the Project Site Development Plan after relocation is complete, including facilities and operations relocated to the Project Site and facilities and operations to remain at the PVT ISWMF. Attached to Figure 2-3 is a brief description of the structures and operational areas in the Project Site Development Plan.

### **2.5.2.1 Site Design and Layout**

The Proposed Action was designed to minimize visual, noise, and dust impacts on the residential communities located south of the Project Site. These design considerations have proven effective at the existing PVT ISWMF and include:

- Maintain adequate setbacks from surrounding land uses, including a 750-foot buffer zone between the nearest residential area (south of the Project Site) and the active disposal area (see Section 2.5.2.2, *Setbacks*).
- Locate non-waste management operations, such as office trailers, employee parking, stormwater basins, and the scale house, at grade (approximately 50 to 70 feet amsl) on the southernmost portion of the Project Site.
- Locate the 10-acre MRD Area at the northernmost portion of the Project Site. The MRD Area would accommodate the MRD-2 and MRD-3 processing lines and renewable energy facility (gasification unit or anaerobic digestion system).
- Limit maximum landfill grades to 255 feet amsl and locate the highest grades in the northeastern portion of the Project Site. Figure 2-4 shows the final elevations of the Proposed Action and the closed PVT ISWMF. The landfill height would increase incrementally over 30 years.
- Develop and implement a Landscaping Plan for the Proposed Action (Appendix I). Native Hawaiian plants that are suitable for the dry environment would be planted near the entrance of the Project Site. Drought tolerant trees and shrubs would be planted around the parking and administrative areas and along the west and south boundaries of the Project Site.

### **2.5.2.2 Setbacks**

PVT would maintain a 750-foot buffer zone between the nearest residential area (located south of the Project Site) and the active disposal area (beginning with Cell 10) of the Project Site, which complies with the CCH Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing). The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

The landfill footprint would be offset from Lualualei Naval Road and the Project Site boundary by a minimum of 100 feet. The landfill access road, drainage features, and landscaping would be within this offset.

The Project Site is designated as an AG-2 General Agriculture district zoning in the CCH LUO. The Proposed Action would comply with the applicable development standards for height and setbacks, which is summarized in Table 2-2.

Section 6, *Conformance with Land Use Plans, Policies, and Controls* provides more information on the Proposed Action's compliance with applicable LUO regulations.

**Table 2-2 AG-2 District Development Standards Summary**

Development Standard		AG-2 District	Proposed Action
Minimum Lot Area		2 acres	179 acres
Minimum Lot Width/Depth		150 feet	1,230 feet
Yards:	Front (South and West)	15 feet	25 feet (South to dust screen) 26 feet (West to landfill access road)
	Side/Rear (North and East)	10 feet	26 feet (East and North to landfill access road)
Maximum Building Area		10%	0.2%
Maximum Height		25 feet (if height setbacks are provided)	25 feet
Height Setbacks		Any portion of a structure exceeding 15 feet must be set back from every front, side, and rear buildable area boundary line one foot for each two feet of additional height above 15 feet.	Complies. All structures will exceed the front, side, and rear yard setbacks by more than 10 feet.

Source: P-2, Agricultural & Country Districts District Development Standards (ROH, §21-3.60-4, Table 21-3.1).

### 2.5.3 Proposed C&D Landfill Design

Approximately, 75 acres of the 179-acre Project Site would be developed as PVT's C&D landfill (Phase III) (Figure 2-3). Table 2-3 summarizes the acreage by landfill cell. The landfill is designed to have five cells. The closest landfill cell to the residential area on the southern boundary, Cell 10, would be filled first and vegetated once closed, acting as a visual barrier for the future landfill cells. There would be two cells in the South Area and three cells in the North Area.

**Table 2-3 C&D Landfill Cell Acreage**

South Area Landfill Cell	Acres	North Area Landfill Cell	Acres
Cell 10	13	Cell 12	16
Cell 11	17	Cell 13	16
<b>Subtotal</b>	30	Cell 14	13
		<b>Subtotal</b>	45
<b>Total Landfill:</b>	<b>75</b>		



Figure 2-4 shows the final elevations of the Proposed Action, once the C&D landfill reaches capacity (maximum elevations 255 amsl). The final landfill surface grades are designed for seismic and slope stability, positive drainage off the landfill surface, and to maximize disposal capacity. The total disposal anticipated capacity of the Proposed Action is 11,923,000 cubic yards.

### 2.5.3.1 Leachate Management

A low volume of leachate is anticipated with the Proposed Action. C&D debris is characteristically dry, has little organic material, and produces significantly less and cleaner leachate compared to MSW. Further, the Project Site is in an area of low rainfall.

PVT operations would also minimize the volume of leachate through the following:

**Leachate:** Leachate is the liquid that can drain or 'leach' from a landfill. Moisture within the landfill moves through the solid waste by gravity, collecting dissolved material along the way, and accumulates at a low point beneath the waste pile, but above the impermeable liner of the landfill. PVT will install a Leachate Collection and Removal System (LCRS) to manage leachate and retain it onsite.

- The active waste disposal area would be as small as possible so it can be covered should a storm approach.
- PVT would continue to prohibit the disposal of liquids and wet waste into the landfill.
- The stormwater management system (described in Section 2.5.3.3, *Stormwater Management [Site-wide]*) would divert stormwater away from the active landfill cells and around the perimeter of the landfill.
- A soil cover would be placed over the waste to discourage percolation.

The impermeable liner (described in Section 2.5.3.2, *Landfill Liner*) would be installed beneath the landfill waste layer to prevent leachate from entering the soil and groundwater below.

Leachate would be managed and retained onsite through a LCRS. The landfill would be graded to direct leachate toward the center of the landfill where it would be collected in perforated pipes. The leachate would be pumped to a holding tank and sprayed from a water truck for dust suppression. The leachate is tested regularly, as specified in PVT's SWMP. Filtration or treatment is not needed.

The LCRS design includes two LCRS sumps. The south area LCRS sump would support the leachate collection system of cells 10 and 11. The north area LCRS sump would service the three remaining landfill cells.

### 2.5.3.2 Landfill Liner

The proposed C&D landfill cells would be underlain by an engineered composite liner that exceeds the industry standard for C&D landfills. C&D landfills are only required to install a clay barrier; the

proposed liner meets State requirements for MSW landfills. The impermeable liner prevents leachate from impacting the soils and groundwater beneath the liner.

Figure 2-5 is a conceptual drawing of the composite lining layers, which consists of a series of natural materials (soil and gravel) and synthetic fabrics (high-density polyethylene plastic and geotextiles). The synthetic fabrics are rolled out in wide sheets and either welded or sewn together in place. The landfill liner installation would be certified by a professional engineer and meet rigorous quality assurance standards. PVT would regularly monitor groundwater to verify the integrity of the liner. The life expectancy of a high-density polyethylene liner in buried applications, such as solid waste landfills, is up to 300 years.

### **2.5.3.3 Stormwater Management (Site-wide)**

Stormwater would be managed by controlled grading on the surface of the landfill and by maintaining an engineered system of drainage ditches, channels, pipes, and basins. Management objectives are as follows:

- Prevent run-on of surface water onto the landfill footprint from adjacent slopes through engineered design of a stormwater diversion channel;
- Minimize stormwater contact with the exposed active landfill disposal face;
- Prevent run-off of water that has contacted the exposed active landfill face;
- Minimize erosion in all areas of the site;
- Maintain roads and other ancillary facilities in usable condition under all weather conditions; and
- Control sediment-laden run-off from on-site stormwater basins with best management practices (BMPs) technology such as surface skimmers.

As with the PVT ISWMF, stormwater for the Proposed Action would be controlled by an engineered stormwater management system. The stormwater management system would be designed to manage runoff from a 25-year, 24-hour storm, as required by the solid waste regulations (HAR § 11-58.1-15(g)). Natural hazards, including those related to climate change, are addressed in Section 3.3, *Natural Hazards*. The design includes Low Impact Development (LID) hydrologic design strategies and BMPs to limit, convey, and retain peak stormwater flows on site. Stormwater will be beneficially re-used on-site to the extent practical.

The stormwater management system would divert stormwater from the active disposal area. The landfill top deck and other areas in the vicinity of active disposal areas would be graded at a slope of 2 to 5% away from the active area. Diversions would be constructed upgradient of the active area, if needed, to prevent stormwater run on from contacting waste and divert stormwater drainage around any exposed waste. Similarly, diversions would be constructed downgradient of exposed waste to prevent the runoff of any precipitation that has contacted waste. Stormwater

that has percolated through the soil cover and contacted waste would be retained within the landfill, for collection and management as leachate.

The stormwater system would collect stormwater runoff from the Project Site and the adjacent slopes of Puu Heleakala and divert it away from on-site operations and the neighboring properties. Stormwater runoff would flow over land into earthen drainage channels located around the perimeter of the Project Site. The channels would convey the stormwater into stormwater basins located in the southern portion of the Project Site (Figures 2-3, 2-9). In addition to stormwater basins, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion.

The stormwater basins located at the southern end of the Project Site are tiered; the basins at higher elevations in the southeast corner of the Project Site will drain to the basin closest to Lualualei Naval Road. Within the basin, stormwater would either naturally percolate into the ground or evaporate (See Section 3.4, *Water Resources* for more information). No underground injection well is proposed.

In the event of an extreme weather event in which runoff exceeds the stormwater basin capacity, the flow would be discharged through a new crossing under Lualualei Naval Road and conveyed into a PVT-owned drainage channel parallel to the southwestern property line of the existing ISWMF property. The stormwater flow would discharge into the existing PVT ISWMF stormwater Basin A-1 for additional retention. Stormwater Basin A-1 is equipped with a skimmer to reduce sediment loading of the stormwater prior to off property release.

The existing NPDES permit for the PVT ISWMF would be updated and modified to include stormwater discharge from the Proposed Action. No new discharge points are planned. In an extreme weather event, the stormwater discharge from the Proposed Action would flow to the existing stormwater basin (Basin A-1) and enter an existing permitted discharge point along Ulehawa Stream (Discharge Point D-1) (Figures 2-3, 2-9). PVT would collect stormwater samples and flow measurements in accordance with the requirements of their updated NPDES permit. The proposed stormwater conveyance system would be inspected and maintained as needed, before and after storm events. Sediment would be removed as needed, or at least once per year.

BMPs for erosion control and stormwater management protocols would minimize sediment and pollutants in stormwater runoff. The maintenance facility, including petroleum, oil and lubricant storage areas, would be covered and spills immediately remediated per the Emergency Management Procedures detailed in the *PVT Operations Plan*.

#### **2.5.3.4 Slope Stability**

To mitigate the potential for soil and foundation movement, and slope failure of the landfill cells, the following BMPs and engineering controls would be implemented:

- The engineered liner system would be designed to be stable under normal and seismic conditions;

- the geosynthetic lining system components would be placed in anchor trenches around the perimeter of the landfill cell to hold the geosynthetic fabric in place;
- the active waste disposal area would be minimized to reduce the erosion potential;
- the waste would be properly compacted using landfill compactors and dozers to minimize voids;
- exterior landfill slopes would be no greater than 3:1;
- a site-specific *Stormwater Pollution Prevention Plan* (SWPPP) and engineering controls for managing stormwater and leachate would be developed to minimize erosion and water infiltration; and
- a site-specific erosion and dust control plans to minimize soil loss.

#### 2.5.3.5 Erosion Control

Erosion would be controlled primarily by the stormwater management system (described above), which incorporates diversion berms, sandbag check dams and similar measures to control and reduce the velocity of runoff. Side slopes would be inspected periodically, and eroded areas repaired. Silt fences and/or interim vegetation would be installed on bare slopes subject to erosion.

There is a potential for large rock movement originating from the slopes of Puu Heleakala. The Proposed Action would incorporate engineered rockfall control measures, including:

- Catchment Areas: The proposed site design includes rock catchment areas between the adjacent slopes and the Project Site, that run parallel to the perimeter access road. These catchment areas would also function as stormwater diversion ditches.
- Rockfall Fences: Where appropriate, the rockfall fences would be located between the upper slopes and the Project Site and constructed of large steel posts and steel cables to function as rock restraints. These structures would also be equipped with chain-link fencing, which provides further rock control and functions as a perimeter security fence. The final design and construction of these fences would be based on recommendations of the geologist or geotechnical engineer with expertise in the practice of rock mitigation/control.

#### 2.5.3.6 Debris Disposal

Debris disposal operations for the Proposed Action would be consistent with the existing operations and SWMP.

C&D debris would be properly placed and compacted in a limited area each day (active landfill face). As filling progresses, the active landfill face incrementally advances across the landfill cell creating successive layers of compacted debris fill until the final permitted refuse grades are achieved. Debris is placed and compacted to ensure maximum density and slope stability. BMPs,

including water trucks and interim cover, would be used to reduce fugitive dust, wind-blown litter, and other environmental nuisances (Section 2.5.7, *Operational Plans and Controls*).

## **2.5.4 Proposed Recycling and Materials Recovery and Diversion Operations**

### **2.5.4.1 Materials Recovery and Diversion**

An area of approximately 10 acres at the north end of the Project Site (Figure 2-3) would be the MRD Area. It would accommodate two processing lines, MRD-2 and MRD-3, which would process the same types of C&D debris as MRD-1 at the PVT ISWMF (Section 2.4.1, *PVT ISWMF Material Acceptance and Disposal*). MRD-1 would remain at PVT ISWMF to be used during periods when MRD-2 or MRD-3 are not operational due to maintenance, repair, or during emergency disaster operations.

The MRD-2 and MRD-3 lines would use a combination of mechanized and manual sorting methods to maximize the recovery of recyclable materials including metals, inert materials suitable for aggregate production, soils for landfill cover, and materials suitable for feedstock production.

The design and layout of the MRD equipment is evolving, based on the lessons learned from the use of MRD-1. MRD-1 currently produces 800 tons of feedstock per day. With MRD-2 and MRD-3 in place, PVT's production of feedstock material would increase to 1600 tons per day. The additional MRD unit would allow temporary employees to have full-time employment and increase PVT's ability to efficiently and quickly process incoming debris during a disaster event. MRD-2 and MRD-3 would provide improved materials recovery and diversion results both in material quantity and quality over MRD-1. Figure 2-6 illustrates the MRD process.

### **2.5.4.2 Landfill Reclamation**

PVT proposes to retain the capability to reclaim landfilled debris at the Project Site for a few reasons.

- In an emergency, hurricane, or other natural disaster, a large quantity of debris could be accepted and landfilled temporarily if the incoming waste volume exceeds the MRD processing capacity. The debris would be reclaimed for processing through the MRD systems when capacity of the MRD is available.
- As new recycling recovery technologies are developed, there may be additional types of landfilled C&D materials that can be reclaimed and further processed.

In such cases, the landfill reclamation operation would be conducted in a similar manner to the current reclamation at the PVT ISWMF. Using an excavator, a bulldozer, and several dump trucks, the refuse would be excavated and loaded directly into trucks for transport to the MRD Area. Interim cover soil would be applied over areas that have been partially excavated.

In the MRD Area, excavated material would be processed through a preliminary screen to remove excess soil and then processed in the MRD lines along with other incoming mixed material.

#### **2.5.4.3 Aggregate Materials Processing**

The aggregate processing operations, materials produced, and end use of aggregate products would be similar to the current operations at the PVT ISWMF. Source-separated and aggregate materials recovered at the MRD operations would be transported to the Aggregate Materials Processing Area (Figure 2-3).

Typical products from the aggregate production operation include mixed earthen materials and crushed rock, concrete, and asphalt used for on-site roads, structural fill, and drainage media for landfill construction or for off-site sale. Scrap metals consisting of steel rebar, wire mesh, and other scrap ferrous metal are also recovered in the process.

Separate stockpiles are maintained in this area for rock, concrete without rebar, concrete with rebar, and asphalt rubble.

In the initial years of the Proposed Action, the Aggregate Materials Processing Area would be in the northern inactive area of the landfill. It would later be relocated to a portion of Cell 11 as landfill cell construction moves north.

### **2.5.5 Proposed Renewable Energy Production**

PVT proposes to install a gasification unit or anaerobic digestion system, and a photovoltaic system to generate renewable energy that would be used onsite to power the office trailers and the MRD process lines. The renewable energy sources would reduce PVT's reliance on Hawaiian Electric Company (HECO) and may reduce the need for power from diesel generators.

Renewable energy installations would meet applicable State and CCH regulations and PVT would obtain additional permits, as necessary.

#### **2.5.5.1 Gasification Unit**

PVT proposes to install and operate a gasification unit, TURNW2E® Gasification Technology (<http://w2es.com/turnw2e.php>) developed by Biomass Energy Systems, Inc. This technology is already proven, as demonstrated by the success of the installation at Joint Base Pearl Harbor.

The primary function of the gasification system would be to convert the photosynthetic energy stored in biomass materials (organic materials) into a clean, synthesis gas that can be converted by a gas engine into electricity. Figure 2-7 illustrates the gasification process.

The gasification system would be located in the MRD area of the Project Site (Figure 2-3) and include several, pre-engineered modules:

- Feedstock processing and feeding;
- Gas generation and cooling;
- Gas filtering; and
- Power generation.

**“Syngas”** (or synthesis gas): a combustible gas mixture that primarily contains carbon monoxide and hydrogen. Syngas is produced from gasification of waste biomass. Syngas has 50% the energy density of natural gas, but burns cleaner.

The gasification unit would utilize approximately 43 tons per day of feedstock generated by the MRD-2 or MRD-

3. Feedstock used to feed the gasification system would be stored in enclosed, steel storage bins or in temporary stockpiles in the MRD Area (Figure 2-3). The feedstock would be loaded into the unit through a series of automated conveyors and hoppers that continuously feed the wood waste into the gasifier.

The gasifier converts the feedstock into a syngas, which then travels through a processing system that cools and removes particulates. Approximately 44 tons (11,600 gallons) per day of potable processing water is used to aid the gasification and cooling processes. The gas filtering and cleanup subsystem also requires the use of 0.12 tons of lime power per day, a 1.5-ton batch of activated carbon per three months, and a 0.25-ton batch of iron oxide to remove impurities. These materials are non-hazardous, would be stored in stainless steel hoppers within the system, and would be handled in accordance with their material safety data sheets.

An internal gas engine converts the syngas into energy. The system is designed to produce between 7,200 and 24,000 kWh of electrical power per day, depending on PVT’s power needs.

The gasifier generates few by-products and emissions. The primary solid discharges from the system are inorganic residue from the solid waste, elutriated fines, and spent sorbents. These materials are collectively referred to as ash. The unit would produce approximately 2.5 tons of ash per day. The ash would be automatically extracted and stored in a hopper within the gasification system. PVT proposes to use this non-hazardous ash for beneficial uses onsite, as permitted by its SWMP. The system would also produce approximately 14.5 tons (3,835 gallons) per day of excess, non-contact water from the syngas cooling process. The water would be stored in tanks within the system and used onsite for dust control.

Emissions from the gasification system would be subject to an HDOH Noncovered Source Permit. The system would emit very low levels of particulates, nitrogen oxides, sulfur oxides, and carbon monoxide. The syngas cleanup process is designed so that the syngas used for electricity generation are well below the regulatory requirements for air emissions. The gasification unit is automated and designed to operate continuously for approximately 330 days a year. Operation of the gasification unit would be in accordance with the SWMP and applicable State and CCH regulations.

### 2.5.5.2 Anaerobic Digestion System

As an alternative to the Gasification Unit, PVT would install and operate an Induced Bed Reactor (IBR) anaerobic digestion system developed by Andigen Ag LLC. The IBR technology has over 20 years of demonstrated success, with over a dozen installations in the continental US. CH4AG, a local company, is planning to install a unit at Brigham Young University in Laie, Oahu.

Anaerobic digestion is a naturally occurring process where micro-organisms breakdown and digest organic materials and produce biogas as a by-product. When controlled in a modern bioreactor, such as the IBR, the environment and conditions for microbial activity are optimized and maintained, creating an energy generating biological system. Figure 2-8 illustrates the anaerobic digestion process.

**“Biogas”**: a combustible, methane (CH<sub>4</sub>) rich gas that is produced by the breakdown of organic matter in the absence of oxygen. Biogas is produced by anaerobic digestion and is an alternative to natural gas once it has been conditioned to remove background gasses and moisture.

The anaerobic digestion system would be located in the MRD area of the Project Site (Figure 2-3) and include several, pre-engineered modules:

- Feedstock processing and feeding;
- Biological pre-treatment;
- IBR digester;
- Biogas recovery, storage, and treatment;
- Digestates storage and processing; and
- Electricity generation.

The anaerobic digestion system would utilize approximately 50 tons per day of a fuel crop/feedstock mixture. Approximately 8 to 10% of the mixture (4 to 5 tons) would be feedstock generated by the MRD-2 or MRD-3. The remaining 45 tons per day of fuel crops would be sourced on site or from local farms. Feedstock used for the anaerobic digestion system would be stored in enclosed, steel storage bins or temporary stockpiles in the MRD Area (Figure 2-3). The feedstock would be loaded into the unit through an automated conveyor.

Within the enclosed system, the feedstock would be pretreated by adding water and heat, which eliminates pathogens and creates a slurry. The system would require approximately 50 tons (12,000 gallon) of potable water per day. The slurry is mechanically transferred to the IBR digester. Anaerobic microbes within the IBR digester convert the slurry into a methane-rich biogas, which is recovered and treated to remove sulfur and other impurities.



An internal gas engine converts the biogas into energy. The system would produce approximately 45,000 kWh of electrical power per day.

The anaerobic digestion system generates few by-products and emissions. The digestion process generates waste heat, which would be captured and reused in the biological pretreatment stage of the anaerobic digestion process. The material that remains after the anaerobic digestion process is called digestates and would be separated into solids and liquid. The solid material would be reused on-site as a soil amendment for PVT's landscaping and may be sold to off-site farms and businesses for use as a soil amendment, animal bedding, or to manufacture fiber building materials, similar to plywood and particle board. The liquid would be used as liquid fertilizer for on-site landscaping.

Emissions from the anaerobic digestion system would be subject to an HDOH Noncovered Source Permit. The biogas cleanup process is designed so that the biogas used for electricity generation results in air emissions well below the regulatory limits. The anaerobic digestion system is automated and designed to operate continuously for approximately 350 days a year. Operation of the anaerobic digestion system would be in accordance with PVT's updated SWMP and applicable State and CCH regulations.

#### **2.5.5.3 Photovoltaic**

PVT proposes to install a PV system on approximately 7 acres of the Project Site. The PV system would generate approximately 8,000 to 10,000 kWh of electricity per day.

The PV system is made up of several key components, including:

- **PV Modules:** PVT is evaluating two possible types of solar PV systems:
  - **Traditional Silicon PV Modules:** High efficiency, non-toxic PV modules, like those used for residential and commercial power generation, would be secured to the side of the landfill by anchored racks.
  - **Combined Flexible Geomembrane and Thin Film PV:** A system for unused portions of the landfill to capture solar energy. The geomembrane is made of thermoplastic polyolefin, similar to the material used on commercial white roofs, and contours to the shape of the landfill. Flexible PV modules are factory bonded to the geomembrane, unrolled on-site and welded together into a solid cover. The PV modules are Teflon-coated and durable enough to walk on.
- **Inverter:** Convert direct current (DC) (e.g., battery) electricity from the PV system into alternating current (AC) (plug in sockets).
- **Balance-of-System Components:** Mounting racks and hardware for the modules and wiring for electrical connections.

- **Battery Storage System:** PVT proposes a system with a capacity of 20 to 40% of PVT's anticipated total daily requirement.

No wastes are produced by the operation of the PV system.

The PV system at the Project Site would be moved twice, as the C&D disposal area expands from the southern to the northern portion of the Project Site. The proposed locations by phase of development are shown on Figure 2-3. The inverter and battery storage system would be located in the MRD Area (Figure 2-3).

The PV System would be designed to maximize efficiency and minimize potential visual impacts to neighboring properties. The PV system would be installed below the 200-foot landfill elevation contour and would be obscured from neighboring properties by the Puu Heleakala Ridge and the closed PVT ISWMF. The PV modules would also be positioned so they do not create a glint or glare hazard to vehicles and aircraft.

#### **2.5.5.4 Hybrid Heavy Equipment**

PVT recently purchased a diesel-electric hybrid tracked-type dozer (Cat D-7) that consumes less diesel fuel, is quieter, and has fewer air emissions. To reduce their dependence on fossil fuels, PVT plans to replace their heavy equipment and other vehicles with hybrid and electric vehicles as they reach the end of their service life.

### **2.5.6 Infrastructure**

The Proposed Action requires the development of infrastructure within the Project Site, such as sanitary waste facilities, internal roads, and drainage features. The Proposed Action would not require new infrastructure to be developed outside of the Project Site. Figure 2-9 is the Infrastructure Plan.

#### **2.5.6.1 Sanitary Wastewater Disposal**

Restrooms would be located in the office trailers and scale house (Figure 2-3). The sanitary wastewater would be discharged into two separate on-site septic systems: one located in the MRD Area and one near the entrance area (Figure 2-9). The individual wastewater systems (IWS) would be designed to meet HAR Chapter 11-62 and PVT would obtain necessary permits for the systems. The IWSs would be designed to treat a projected wastewater volume for up to 80 employees who would staff and operate the facility daily.

#### **2.5.6.2 Water Facilities**

Potable water for the Proposed Action would be generated on site from non-potable water using reverse osmosis or provided by the Board of Water Supply (BWS) municipal system. Potable water use for the proposed operation includes: landscape irrigation, office trailers, daily washout of the water trucks, operation of the water sprayer used for dust control, and process water for the gasification unit or anaerobic digestion system. Bottled water would be used for drinking.

Potable water use for the Proposed Action would be minimal, similar to that of PVT ISWMF, which uses approximately 65,000 gallons per day. There would be little, if any, net increase in potable water use as operations transition from the PVT ISWMF to the Project Site. Inactive portions of the landfill would be vegetated to reduce the need for dust suppression, but the groundcover is drought tolerant and would not require irrigation.

Non-potable water would be withdrawn from two existing wells on the Project Site (PW-1 (Well 2308-03) and North Well (Well 2408-11)) (Figure 2-9). PW-1 is located in a basal, unconfined dike aquifer (Aquifer Code 30302112). The aquifer is classified as not ecologically important and replaceable (Mink and Lau, 1990). PVT's North Well is in the upper, basal, unconfined, sedimentary caprock aquifer (Aquifer Code 30302116). The aquifer is classified as not ecologically important and irreplaceable (Mink and Lau, 1990). Both aquifers have moderate salinity with chloride concentrations between 1,000 and 5,000 mg/l and are not a source for drinking water. The brackish water would be pumped into the two existing and two planned aboveground tanks located near the wells (Figure 2-9). Non-potable water would be used as the primary method of dust control.

Water usage from the wells is permitted up to a maximum of 288,000 gallons per day (gpd) per well, and usage is documented with meters installed on the output of the wells (Department of Land and Natural Resources [DLNR] Well No: 2308-03 and Well No. 2408-11). The aquifers' sustainable yields and pumpage were considered in issuing the permits. PVT does not propose to increase the permitted usage. Current water usage is approximately 100,000 GPD. Operational controls to minimize water use would include vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (i.e., portions of the materials recovery areas).

When there is no future use for the wells at the PVT ISWMF and Project Site, the wells will be properly abandoned and sealed. Permits from the Commission will be obtained prior to any sealing work.

#### **2.5.6.3 Electrical Power**

The power requirements for the Proposed Action would be 4,500 kWh per day with 10 to 15% additional power surge required to start the MRD equipment. PVT aims to meet 100% of its proposed power needs through renewable energy sources, which would generate between 17,000 kWh to 55,000 kWh per day. Reliance on HECO will decrease over time as PVT advances toward their energy goals until HECO service is limited to backup and emergency power.

Power to operate the scale house, office trailers, and the MRD Area would be provided by one or more of the following energy sources:

- Renewable energy: gasification unit or anaerobic digestion system and PV system (Section 2.5.4, *Proposed Recycling and Materials Recovery and Diversion Operations*);
- Diesel generators (interim use until renewables meet 100% of onsite demand); and

- HECO (auxiliary and back-up source only).

The proposed connection point to the HECO infrastructure on Lualualei Naval Road is shown on Figure 2-9. The onsite lines will be underground. A 46-kilovolt power line, reported to be currently in use, crosses the southern portion of the Project Site. PVT would coordinate with HECO to relocate this line to the southeast boundary of the Project Site (Figure 2-9). Relocation of the line may require approval from the Public Utilities Commission.

#### **2.5.6.4 Proposed Action Access, Traffic, and Parking**

##### **Access**

The Proposed Action would be accessed via Lualualei Naval Road, which is owned and controlled by the U.S. Navy. The Project Site and PVT ISWMF entrances are directly across the road from each other. PVT has permission from the U.S. Navy for the use of Lualualei Naval Road. The entrance and exit would be the same (Figure 2-3).

The only vehicular access for the Proposed Action would be through the main gate at Lualualei Naval Road. Unauthorized access would be prevented by a perimeter fence and/or by the natural topographic barrier of the Puu Heleakala mountain range on the east side of the Project Site. The main gate would be locked after hours.

Signs and spotters at key locations would direct customers from the front gate to the scale house, and from the scale house to designated areas for unloading. Signs would also be posted to inform customers of on-site speed limits (15 miles per hour [mph]).

All access roads used by customers would be maintained as all-weather roads by surfacing with rock, asphalt, or concrete rubble. Roads would be graded and watered as needed to maintain them in a smooth condition with minimum dust generation.

##### **Traffic**

All C&D customers are subject to PVT prequalification procedures and must agree to PVT operations policies, including the following measures to minimize traffic impacts to the community:

- Adhere to the operating hours (Section 2.5.8, *Hours of Operation*).
- No early arrivals. Based on the PVT ISWMF experience, there would be occasional early arrivals. As is current practice, the drivers would be reminded of the rules, invited to wait inside the gate, and be issued a warning. Repeat offenses would result in revoking the driver's access privileges.
- Turn off diesel engines while waiting in line to minimize the noise and diesel odor emissions.

- Adhere to posted speed limits both on- and off-site. PVT encourages community members to call their office to report speeding trucks. PVT penalizes speeding drivers and will suspend repeat offenders from the site, if necessary.

There would be no increase in traffic for the Proposed Action relative to the existing ISWMF traffic. The traffic would relocate to the Project Site, as the various operations relocate. The combined PVT traffic would be as follows:

- Up to 60 full-time and 20 temporary employees.
- Up to 300 C&D waste haul trucks per day.
- Up to 3,000 tons of waste accepted per day.

PVT would minimize the movement of vehicles and equipment between the PVT ISWMF and Project Site during construction and relocation. Spotters would be posted along Lualualei Naval Road to direct traffic. Once the relocation is complete, there would be little to no truck and equipment movements across Lualualei Naval Road.

#### **Parking**

- Employee parking would be developed in two areas: the MRD Area (40 stalls) and at the office trailers near the Project Site entrance (40 stalls) (Figure 2-3).
- Waste haul truck parking, queuing, and off-loading operations would occur within the Project Site:
  - Trucks entering the property would form a line, if necessary, within the 700-foot (minimum) distance between the entrance and the scale house. Based on experience, 700 feet is a sufficient distance to accommodate peak arrival times.
  - Temporary standby area would be provided in an area near the stormwater basin (Figure 2-3) to allow drivers to check-in with their dispatch service for further direction prior to exiting the Project Site.

#### **2.5.6.5 Fire Protection**

Emergency Management Procedures (Section 2.5.7, *Operational Plans and Controls*) are included in the SWMP and PVT *Operations Plan*. They would be updated for the Proposed Action but would be similar to current practices at the PVT ISWMF.

PVT coordinates with the Honolulu Fire Department (HFD) with respect to fire protection requirements and would continue to do so for the Proposed Action. Historically, the HFD has been prepared to respond to fires affecting the surface structures, while PVT responds to subsurface landfill fires. PVT would continue to rely on non-potable water sources from on-site wells for fires at the Project Site. No BWS-supplied water would be required.

The following current practices would be applicable to the Proposed Action:

- Smoking would not be permitted on the landfill or in the recycling and materials recovery area.
- Fire extinguishers would be provided in all buildings at the site for use in extinguishing small fires.
- All on-site vehicles are equipped with fire extinguishers.
- Annual training of PVT personnel in fire prevention and fire management procedures.
- Application of adequate cover material to the landfill to minimize the amount of oxygen entering the landfill.
- Inspections of the landfill and recycling areas. An infrared camera mounted on a drone is used to detect "hot spots."
- Steel gas probes approximately 10 feet long by 2.5 inches in diameter are strategically placed around the landfill as needed for gas monitoring and carbon dioxide injection.
- Fire prevention activities include injecting carbon dioxide at the "hot spot" location identified by drone surveys or if oxygen gas monitoring indicates a possible subsurface fire. Carbon dioxide is also injected into buried feedstock areas as a fire preventative measure.

The firefighting equipment would include four bulldozers, seven excavators, seven water trucks with capacities of 4,000 gallons, five front-end loaders, three large dump trucks, and two large compactors. Use of hand-held, two-way radios, and vehicle radios would allow workers to communicate immediately in case of an emergency or fire.

Water for the water trucks would be accessible via three 12-inch drop pipes from three 12,000-gallon jack-up portable water tanks and two non-potable water tanks with capacities of 40,000 gallons each. A 1,200-gallon non-potable water tank would be located at the material recovery facility. The jack-up water tanks receive water from water storage tanks and water production wells.

In case of a major surface fire, HFD would be contacted immediately and on-site resources such as fire extinguishers, cover material (compressed soil or earth), and non-potable water would be mobilized to contain the fire. The least amount of water possible would be used to extinguish the fire to prevent generation of large amounts of leachate. If water or fire extinguishers are not effective immediately, the fire would be smothered using soil. After the fire is extinguished, it would be uncovered, inspected, and wetted before the extinguished materials are reburied.

Fire department access roads would be constructed in accordance with applicable National Fire Protection Association regulations. PVT proposes to install self-contained, pressurized fire

sprinkler systems in the office trailers, or similar protections. PVT would submit civil drawings to HFD and obtain necessary approvals prior to construction, as needed.

The Federal Fire Department also provides services to the Project Site.

#### **2.5.6.6 Municipal and Hazardous Wastes**

The Proposed Action would generate small quantities of MSW from the office trailers and employee breakroom. Transportation and disposal of MSW for the Proposed Action would be provided by PVT. The Proposed Action would not generate hazardous wastes.

#### **2.5.7 Operational Plans and Controls**

In conjunction with the design features described above, there are protocols and systems designed to monitor the effectiveness of the design and verify adverse impacts to the environment are avoided through inspection and monitoring. The following plans are included in the PVT ISWMF's SWMP, *Operations Plan*, and would be modified for the Proposed Action:

- Appendix B: Disposal Policies and Procedures, and Waste Profile Sheets;
- Appendix C: Employee Safety Plan;
- Appendix D: Safety Training Course Online;
- Appendix E: Unacceptable Waste Exclusion Program;
- Appendix F: Site Inspection Checklist;
- Appendix G: Emergency Fire Plan;
- Appendix H: Hydrology Study;
- Appendix I: Seismic Stability Analysis; and
- Appendix J: Gasification Operations Manual and Gasification Flow Chart.

The *Operations Plan* also describes actions taken to address the following areas of environmental concern:

- Litter Control;
- Dust Control;
- Odor Control;
- Vector Control;
- Explosive Gas Control;

- Noise; and
- Emergency Management Procedures: Fire, Severe Storms, Earthquake, Hazardous Material Spills, Injury Accidents.

#### **2.5.7.1 Litter Control**

PVT's litter control program would include:

- Daily litter sweeps;
- Install and maintain litter fencing downwind of the landfill area; and
- Interim covering of active landfill cells.

In the event of a major windstorm, the litter control program would include these additional avoidance measures if it is safe to do so:

- Install portable windbreak screens upwind of the active disposal area;
- Use portable litter screens, typically 12 feet high and 20 feet wide, located in downwind locations near the active disposal area in the landfill; and/or
- Hire additional, temporary personnel to collect litter both on and off the site.

#### **2.5.7.2 Dust Control**

PVT would implement dust control measures to minimize the generation and dispersal of fugitive dust, including:

- Pave and regularly clean permanent access and haul roads;
- Apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- Apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- Landscape closed portions of the landfill area;
- Apply soil cement to unused portions of the landfill area;
- Maintain a 750-foot buffer zone along the southern property boundary;
- Install a dust screen along the southern property boundary;



- Maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;
- Install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- Periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

PVT continues to work with the U.S. Navy to address dust generated by truck traffic on Lualualei Naval Road.

#### **2.5.7.3 Odor Control**

Odor is ordinarily not an issue at C&D disposal facilities. Potential odor sources would include waste containing decomposing organic matter or vegetative material, or some types of petroleum-contaminated soil. Any noticeable odor would be investigated to determine its source and dealt with accordingly. Odorous loads would be immediately identified at the scale house and either rejected or immediately deposited and covered with non-odorous refuse or soil.

#### **2.5.7.4 Vector Control**

C&D disposal facilities do not attract flies, rodents, birds, or other pests. Proper application of cover material would discourage use of the site by vectors. PVT personnel would be directed to report to supervisors any sighting of vectors and deal with the vectors accordingly.

#### **2.5.7.5 Explosive and Landfill Gas Control**

PVT has a landfill gas monitoring and management program, which would be updated and implemented as part of the Proposed Action. Steel gas probes are strategically placed around the landfill as needed for gas monitoring and carbon dioxide injection. Landfill gases are produced when bacteria break down organic waste. The rate and volume of landfill gases generated by decomposition of C&D debris is extremely low compared to MSW landfills. C&D landfills do not generate measurable quantities of methane. The organic material in C&D debris is limited primarily to wood and clearing and grubbing debris, which decays slowly. At the PVT ISWMF, organic materials are removed to the extent practical and recycled as feedstock for energy providers. Because of the lack of C&D landfill gases, PVT injects and sequesters carbon dioxide gas in the landfill. The carbon dioxide gas drives out oxygen, minimizing fire potential and generation of odorous gases.

#### **2.5.7.6 Noise Control**

PVT's policies would minimize noise impacts on sensitive receptors and would include the following:

- Require all site-owned and customer-owned vehicles traveling internally on the site to be operating with fully functional mufflers and in a state of good repair.

- Encourage quiet operating techniques and practices.
- Maintain the commonly traveled roads to keep a smooth evenly sloped surface free from major bumps and potholes that cause noise when traveled over.
- Grade all roads at a low enough slope that they do not require excessive throttle to navigate.
- Post signage to inform drivers of “no engine braking” and “no horn unless emergency” areas close to noise critical areas.

#### **2.5.7.7 Emergency Management Procedures: Fire, Severe Storms, Earthquake, Hazardous Material Spills, Injury Accidents**

PVT maintains Emergency Management Procedures that would be updated to address the Proposed Action. PVT closes the facility and ceases operations when wind speeds exceed 40 miles per hour. Fire Protection is described in Section 2.5.6, *Infrastructure*. In the event of an emergency, landfill operations would cease, as necessary, to assess the emergency, and aid in the safety of PVT employees and members of the surrounding communities.

#### **2.5.8 Hours of Operation**

Hours of operation for customers would be maintained as follows:

Facility:	Monday – Friday	7:00 AM - 4:00 PM
	Saturday	7:00 AM - 1:30 PM
Scale house:	Monday – Friday	7:00 AM - 3:00 PM (last truck)
	Saturday	7:00 AM - 1:00 PM (last truck)
ACM Acceptance:	Tuesday and Thursday	7:00 AM - 3:00 PM

The Proposed Action would only operate during daytime hours and would not include ACM acceptance.

## **2.6 Description of the Construction Phase**

### **2.6.1 Site Development and Relocation Schedule**

No public lands or funds would be required for the Proposed Action.

The development of the Project Site is scheduled to begin once all permits are obtained (Table 1-1). Table 2-4 is a tentative schedule for development of the Project Site. The project schedule is subject to change based on changes to incoming and outgoing debris at the PVT ISWMF.

Initial Project Site preparation would include clearing and grubbing of rocks and vegetation. Grading would be required throughout the parcel. Soil excavated from the Project Site would be reused for grading of the Project Site and/or would be stockpiled on site to provide for interim cover. Staging and stockpile areas would be prepared as necessary with appropriate stormwater pollution prevention features and fugitive dust suppression. Soil borings conducted at the Project

Site indicate that subsurface materials can be readily excavated using standard construction equipment. Explosives would not be used at any point during the construction and operation of the proposed facility.

In conjunction with the clearing, grubbing, and mass grading, PVT would construct the security fencing, internal roads, stormwater basin, and drainage features. The MRD area would be paved in preparation of the MRD-2 and MRD-3. Landscaping would be installed per the site-specific Landscaping Plan. All operations would remain at the existing PVT ISWMF during this initial construction phase (1 to 2 years).

Most of the relocation would occur in years 2 through 4. The scales, office trailers, and supporting infrastructure (e.g., water, wastewater, electricity, telecommunication) would be constructed. The liner and LCRS for the first landfill cell, MRD-2 and MRD-3 equipment, PV system (initial location), and the gasification unit or anaerobic digestion system would be installed. The first operations PVT would relocate is its materials recovery and diversion and aggregate materials processing. During this time, select waste haul trucks with reusable or recyclable C&D materials would be accepted at the Project Site for sorting and processing. During the year 2 through 4 construction phase, there would be some internal truck traffic between the PVT ISWMF and Proposed Action.

Disposal operations would remain at the existing PVT ISWMF until the Phase I and II landfill reaches capacity. PVT would then relocate its C&D waste disposal operations to Phase III and complete the closure of Phase I and II, per PVT's *Closure Plan*. ACM acceptance and disposal operations would remain at the PVT ISWMF until final grades within this area are achieved, at which time PVT would no longer accept ACM. Some axillary structures (e.g. administrative building, MRD-1, and scales) would remain at the PVT ISWMF post-closure as back-up (Section 2.5, *Description of the Proposed Action*).

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**Table 2-4 Tentative Schedule for Development of the Project Site**

Timeline	Construction Activities	Operational Activities
Year 0 - 2	Security and Fencing Stormwater Basin and Drainage Features Landscaping Internal Roads MRD Area Entrance Area	All operations remain at existing PVT ISWMF
Year 2 - 4	Truck Scales and Scale House Office Trailers & Parking – MRD Area Office Trailers & Parking – Entrance Landfill Cell 10 and LCRS Sump MRD-2 and MRD-3 PV System Location 1 Gasification Unit or Anaerobic Digestion System	Relocate MRD Operations Operation of MRD-2 and MRD-3 Relocate Aggregate Materials Processing Operations Generation of Renewable Energy to Power PVT Operations
Year 4 - 10	Solidification Area	Relocate PVT C&D Waste Disposal Operations to Phase III Relocate Solidification Operations
Year 10+	Subsequent Landfill Cells (as needed)	

### 2.6.2 Labor

The majority of the construction activities would be completed by PVT's current employees. The construction of the Proposed Action is anticipated to temporarily increase vehicle traffic to the Project Site by up to five vehicles per day over the construction period, which will not be during peak traffic hours.

### 2.6.3 Construction Impact Avoidance and Minimization Measures

Construction activities would comply with industry standards and BMPs to minimize adverse environmental impacts, including impacts on the community. Most of these practices are applicable to the daily operations of a working landfill and are conditions of the PVT SWMP and include:

- Limit construction activities to weekday, day-time hours;
- Develop and implement a site-specific SWPPP;
- Develop and implement dust control measures that include the BMPs outlined in Section 2.5.7.2, *Dust Control*;
- Comply with applicable Occupational Safety and Health Administration (OSHA), Environmental, Health, and Safety regulations;

- Implement the interim protection measures for State Inventory of Historic Places (SIHP) 50-80-08-6699 per the State Historic Preservation Division (SHPD)-approved *Preservation Plan* (CSH 2007c) (i.e., fencing, identify location on construction drawings);
- If there is an "inadvertent discovery" of human remains, work would cease, the Honolulu Police Department (HPD) and DLNR would be contacted for further direction (HAR § 13-300-40); and
- Immediately prior to clearing and grading, hire a qualified biologist to survey the site for nesting activity of the Short-eared Owl, Pueo (*Asio flammeus sandwichensis*).

**"Inadvertent discovery":** The unanticipated finding of human skeletal remains and any burial goods resulting from unintentional disturbance, erosion, or other ground disturbing activity (HAR § 13-300-2).

## 2.7 Alternatives to the Proposed Action

A range of alternatives to the Proposed Action were considered. Alternatives identified and evaluated include those that could meet both the objectives, and the purpose of and need for the Proposed Action.

### 2.7.1 Alternatives Considered and Dismissed

#### 2.7.1.1 Alternative Designs, Waste Management Strategies, and Technologies

The technology available for recycling C&D waste and diverting it from the landfill continues to evolve. PVT recycles and/or reuses up to 80% of incoming C&D waste. The remaining 20% of non-recyclables are and would continue to be landfilled. PVT continues to explore new options for recycling and reuse. However, there are no technologies available at present that would eliminate the need for a C&D landfill.

Vertical or horizontal expansion of the existing PVT ISWMF is not possible due to engineering and physical constraints.

PVT considered several design alternatives in the development of the Proposed Action. The Proposed Action was designed to minimize visual, noise, and dust impacts on the residential communities located south of the Project Site. The selected design has proven effective in mitigating potential impacts based on prevailing wind, terrain, technology, and years of operational BMPs at the existing PVT ISWMF. Alternative designs considered and dismissed include:

- Increasing the maximum landfill elevation – The maximum landfill grade would be 255 feet amsl with the highest grades located in the northeastern portion of the Project Site (Figure 2-4). The 255 feet amsl limit is consistent with the existing PVT landfill and would minimize visual impacts to the surrounding community and culturally important viewplanes (e.g. Hina's Cave).

- Locating the site entrance / exit further into Lualualei Naval Road – The Project Site entrance / exit would be located directly across from the PVT ISWMF site entrance/exit (Figure 2-3). Access is permitted by PVT’s lease with the U.S. Navy. PVT considered siting the entrance further north on Lualualei Naval Road. However, this option was dismissed because renegotiating their lease with the U.S. Navy would take several years. The Proposed Action would not be constructed prior to the closure of the PVT ISWMF. Delays in the Proposed Project would ultimately be borne by the construction industry.
- Increasing the size of the buffer zone – PVT would maintain a 750-foot buffer zone between the nearest residential area (located south of the Project Site) and the active disposal area (beginning with Cell 10) of the Project Site. A 750-foot setback was selected to be consistent with PVT’s existing SWMP, minimize impacts to surrounding land uses, and maximize the use of the available land area. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. As described in Section 6.3.2.3, the 750-foot buffer complies with the CCH LUO (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and increasing the size of the buffer zone would not result in less environmental impact. Resource experts analyzed the impacts of the Proposed Action on air quality (Appendix B and C), noise (Appendix D), and traffic (Appendix F) and incorporated the 750-buffer zone in their models/analysis. Each study determined that the Proposed Action would have no significant impact on the studied resource. Increasing the size of the buffer zone would decrease the lifespan of the facility, meaning the CCH will have to site and construct another landfill sooner.
- Alternative designs for the stormwater basin – The stormwater basin was sized to manage runoff from a 25-year, 24-hour storm, as required by the solid waste regulations (HAR § 11-58.1-15(g)). The design includes LID hydrologic design strategies and BMPs to limit, convey, and retain peak stormwater flows on site. Astroturf will cover the stormwater basins to reduce dust generation and so that the stormwater basin visually looks like a large field (i.e. minimize visual impacts). Astroturf was selected over landscaping in the basins because the lack of potable water on the site for irrigation and ease of maintenance.

#### **2.7.1.2 Postpone Relocation of the Existing PVT ISWMF**

PVT would maximize the capacity of the existing site prior to closure and relocation of operations to the Project Site. The timing of the Proposed Action is dependent on the permit conditions and the volumes of C&D waste generated on Oahu, which has been greater in recent years than anticipated.

PVT proposes to continue to provide critical waste management services to the community without interruption. Even if the actual relocation is postponed, it is prudent to get started early. PVT assumes all financial risk of advance planning.

#### **2.7.1.3 Alternative Locations**

The Project Site is the only land parcel available to PVT and its proximity to the PVT ISWMF maximizes future operational efficiency and flexibility. Nevertheless, the EIS team evaluated 11

sites previously identified by the CCH as possible locations for waste management and disposal. The methods and rationale used to determine each site's availability and suitability for use as a C&D ISWMF is provided in the subsequent pages.

### **CCH Landfill Siting Studies**

The CCH Department of Environmental Services (ENV) published two recent landfill siting studies (Appendix L):

- Report of the Mayor's Advisory Committee on Landfill Selection (MACLSS), September 2012 (CCH ENV 2012).
- Assessment of Municipal Solid Waste Handling Requirements for the Island of Oahu, November 2017 (CCH ENV 2017).

The 2012 MACLSS report identifies and ranks potential landfill sites for consideration by the CCH. The process of identifying landfill sites began with an inventory of 43 potential sites identified in the CCH's previous studies and investigations from 1980 to 2012. The CCH ENV also identified 465 potential new sites for consideration using a desktop, geographic information systems (GIS) based analysis.

The 2012 MACLSS report developed screening factors to evaluate and disqualify sites that were not appropriate for landfill development. The screening factors included:

- Protection of runway airspace near Oahu's active airports and airfields;
- Federal land ownership with military uses;
- Conservation district designated land (any site with a Conservation district subzone other than the least restrictive General Subzone);
- BWS well capture zones;
- Commission on Water Resource Management (CWRM) well sites;
- Critical Habitats and Natural Area Reserve System lands;
- Impaired Water Bodies as designed by the U.S. Environmental Protection Agency (U.S. EPA) and HDOH; and
- Valued agricultural lands according to the Agricultural Lands of Importance to the State of Hawaii and Land Study Bureau classification systems.

After applying these screening factors to the 465 potential sites, 11 sites remained with no. 1 being the most compatible and no. 11 being the least compatible for use as a waste disposal and

processing facility. Further application of the Committee’s community-based criteria shown in Table 2-5.

**Table 2-5 MACLSS Community-Based Criterion**

No.	Criterion Name	Weight
1	Landfill Capacity	2.50
2	Location Relative to Educational Institutions, Health Care Facilities, or Parks and Recreation Facilities	9.85
3	Location Relative to Residential Concentrations	10.00
4	Location Relative to Visitor Accommodations	4.00
5	Location Relative to Local or Visitor Commercial Facilities	4.00
6	Effect on Established Public View Planes	2.50
7	Wind Direction Relative to Landfill Site	4.00
8	Effect on Local Roads and Traffic in Residential Neighborhoods	9.55
9	Wear and Tear on Highways and Roadways caused by Landfill Related Traffic	1.00
10	Location Relative to Identified Community Disamenities	9.25
11	Location Relative to H-POWER	8.65
12	Effect of Precipitation on Landfill Operations	9.25
13	Landfill Development, Operation and Closure Cost	7.00
14	Displacement Cost	2.50
15	Potential for Solid Waste-Related Land Uses	1.00
16	Location Relative to Wetlands and Natural Area Reserve System (NARS)	4.00
17	Location Relative to Listed Threatened and Endangered Species	2.50
18	Surface Water Resources	8.95
19	Archaeological and Culturally Significant Resources	1.00

Source: CCH ENV 2012.

In 2017, the CCH ENV re-evaluated the 11 sites identified in the 2012 MACLSS report against technical and logistical criteria developed to measure each site’s feasibility, cost effectiveness, and functionality to serve as a future landfill location. This evaluation provided a ranking based on a different focus from that of the previous community-based ranking of the MACLSS. Six criteria: landfill lifespan, site development cost, roadway improvement cost, access road requirement, location relative to H-POWER, and acquisition were developed. For each criterion, a score was assigned to each site that measured that site’s suitability to meet that criterion when compared against the other sites. All criteria were weighted equally.

Table 2-6 summarizes the findings of CCH ENV’s 2012 and 2017 reports. Figure 2-9 shows the location of the 11 sites and 2017 rankings.



**Table 2-6 Results of the CCH ENV 2012 and 2017 Landfill Siting Reports**

Site Name	2012 Ranking	2017 Ranking	TMK	Parcel Acreage	Land Ownership	Land Use
Upland Kahuku 2	1	10	57002001	1529	Federal - Military	Agriculture
Upland Kahuku 1	2	11	56008002	1621	Federal - Military	Agriculture, Commerce
Upland Pupukea 2	3	7	61007001	1672	Private - Trust	Ag Industry Preservation
Upland Pupukea 1	4	9	61006001	2177	Private - Trust	Ag Industry Preservation
Ameron Quarry	5	2	42015001	382	Private	Industry, Preservation
Upland Nanakuli 1 (Waianae Valley)	6	1	85006004	882	State	Agriculture
Upland Laie	7	8	55007001	2231	Private - Church	Agriculture, Preservation
Keaau	8	4 (tie)	83001040, 83001041, 83001042	634	Private	Agriculture, Preservation
Kaneohe by H3	9	4 (tie)	44012001	158	Private	Preservation
Upland Hawaii Kai	10	6	39010047	97	Private - Trust	Preservation
Kapaa Quarry Road	11	3	44011003	258	Private - Trust	Preservation

Sources: CCH ENV 2012, 2017.

### Alternative Locations Analysis

The EIS team evaluated the 11 sites studied by the CCH to determine their availability and suitability for use as a C&D ISWMF. Each site was screened based on the information provided in the CCH studies and the additional criteria, as summarized in Table 2-7:

- Ownership of property and ability of PVT to acquire;
- Compatibility with current and surrounding land uses;
- Vacant land / ability to develop within timeframe of the PVT ISWMF closure;
- Sufficient developable area (minimum 100 acres);
- Proximity to existing PVT ISWMF operations, maximizing operational efficiency at both sites; and
- Engineering and site development constraints.

**Table 2-7 Summary of Alternative Sites Analysis**

Site Name	Retained in EIS	Rationale
Upland Kahuku 2	No	Federal Land Ownership – Based on the CCH's past experience with the difficulty of acquiring Federal land for its facilities including the rejection of prior requests for the use of land for landfilling (CCH ENV 2012).
Upland Kahuku 1	No	Federal Land Ownership – Based on the CCH's past experience with the difficulty of acquiring Federal land for its facilities including the rejection of prior requests for the use of land for landfilling (CCH ENV 2012).
Upland Pupukea 2	No	Land Use – Ag-1 (restricted agriculture) zoning designation, waste disposal and processing is not a permitted use per the LUO.  Engineering and site development constraints – The site is underlain by fresh water. HDOH prefers to site landfills where there is little to no risk of impact to drinking water.
Upland Pupukea 1	No	Land Use – Ag-1 (restricted agriculture) zoning designation, waste disposal and processing is not a permitted use per the LUO.  Engineering and site development constraints – The site is underlain by fresh water. HDOH prefers to site landfills where there is little to no risk of impact to drinking water.
Ameron Quarry	No	Land Use – The Ameron Quarry site is currently an active quarry. Quarrying operations would not end within the timeline that a new C&D ISWMF is required (CCH ENV 2017). A portion of the site has a P-1 (restricted preservation) zoning designation. Although waste disposal and processing is a permitted use of P-1 lands, the purpose of the preservation districts is to preserve and manage major open space and recreation lands and lands of scenic and other natural resource value.
Upland Nanakuli 1 (Waianae Valley)	No	Engineering and site development constraints – Parcel located in upper, northwest section of Waianae Valley. Use of the site would require extensive roadway improvements to CCH and privately-owned roadways (Waianae Valley Road, Piliuka Place, and Kawiwi Way) for which PVT has no jurisdiction (Figure 2-10) (CCH ENV 2017).  Engineering and site development constraints – The site is underlain by fresh water. HDOH prefers to site landfills where there is little to no risk of impact to drinking water.
Upland Laie	No	Land Use – The eastern half of the site has a P-1 (restricted preservation) zoning designation.

Site Name	Retained in EIS	Rationale
		<p>Engineering and site development constraints – Use of the site would require extensive roadway improvements to CCH and privately-owned roadways for which PVT has no jurisdiction (Figure 2-11) (CCH ENV 2017).</p> <p>Engineering and site development constraints – The site is underlaid by fresh water. HDOH prefers to site landfills where there is little to no risk of impact to drinking water.</p>
Keaau	No	<p>Land Use – There are many years of well documented community efforts to preserve the site from development due to its rich cultural history and archaeological resources. In 2018, a Senate Resolution was proposed to preserve the area (S.R. 42 S.D. 1 2018).</p> <p>A large portion (approximately 1/3) of TMK 83001040 and the western boundary of TMK 83001042 is within the Tsunami evacuation zone. Landfill operations cannot be sited within the tsunami inundation zones per HDOH regulations.</p> <p>TMK 83001041 has a P-1 (restricted preservation) zoning designation. The parcel is located on southern slopes of the ridgeline and contains little usable space for C&amp;D ISWMF operations.</p>
Kaneohe by H3	No	<p>Land Use – The site has a P-1 (restricted preservation) zoning designation.</p> <p>Engineering and site development constraints – Close proximity to wetlands. Difficult to operate a landfill due to high rainfall and potential runoff issues that could impact water quality.</p>
Upland Hawaii Kai	No	<p>Land Ownership - Placed in a preservation trust and many years of well documented community efforts to preserve the site from development (CCH ENV 2017).</p>
Kapaa Quarry Road	No	<p>Land Use – The site has a P-1 (restricted preservation) zoning designation.</p> <p>Engineering and site development constraints – Close proximity to wetlands. Difficult to operate a landfill due to high rainfall and potential runoff issues that could impact water quality.</p>

### **2.7.2 No Action Alternative**

The No Action Alternative would not meet the purpose and need or objectives for the Proposed Action (Section 2.2, *Purpose and Need for the Proposed Action*). The PVT ISWMF would be closed when it reaches capacity, in accordance with its SWMP. As it is the only public C&D landfill, an alternative solution for the processing and disposal of emergency and C&D debris would be the responsibility of the CCH. The CCH would have to identify an alternative site and funding for C&D debris disposal.

The Project Site would remain vacant until an alternative use is identified.

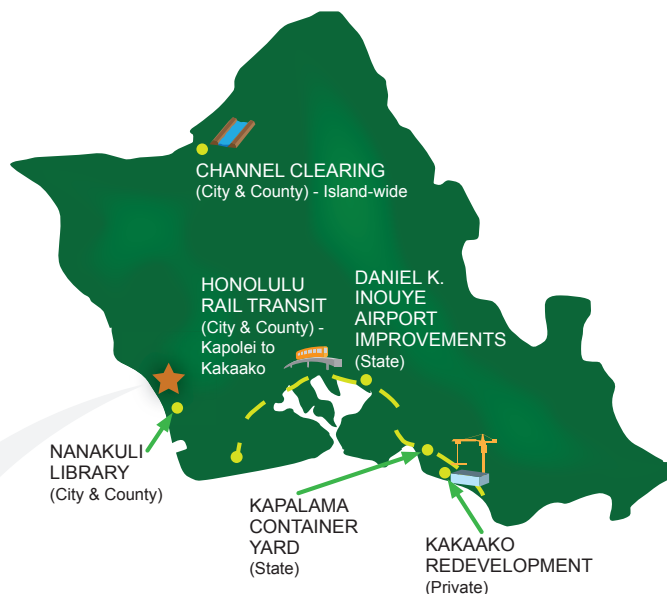
The No Action Alternative is retained in the environmental impact analysis as a baseline for existing conditions.

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## GENERATION

Construction and demolition (C&D) projects throughout Oahu generate building material debris (e.g., wood, concrete, metal, glass, roofing tile, etc.). Nearly all of the C&D debris generated on Oahu is processed or disposed of at PVT Integrated Solid Waste Management Facility.



## PVT INTEGRATED SOLID WASTE MANAGEMENT FACILITY

C&D debris is processed at PVT ISWMF for reuse, recycling or safe disposal.



### C&D AND RECYCLABLE MATERIALS

PVT directs loads with recyclable materials to the materials diversion and recycling area for further sorting, stockpiling and/or transfer to off-site recyclers. Approximately 80% of all materials entering PVT ISWMF are diverted for reuse or recycling.



### SPECIAL WASTES

Asbestos containing materials and petroleum-contaminated soils require special handling and are placed in designated areas of the PVT ISWMF C&D landfill.



### REUSE

Concrete, soil and rock is reused onsite for roads or as daily landfill cover.



### OFF-SITE RECYCLING

Scrap metal including copper, aluminum and steel is trucked off-site for recycling.



### WASTE-TO-ENERGY

Debris that is mostly organic is processed using a Materials Recovery Device (MRD) to remove the non-organic materials and create feedstock suitable for producing syngas and electricity.



### DISPOSAL

Non-recyclable materials such as glass and roofing tile are disposed of in the lined landfill area.

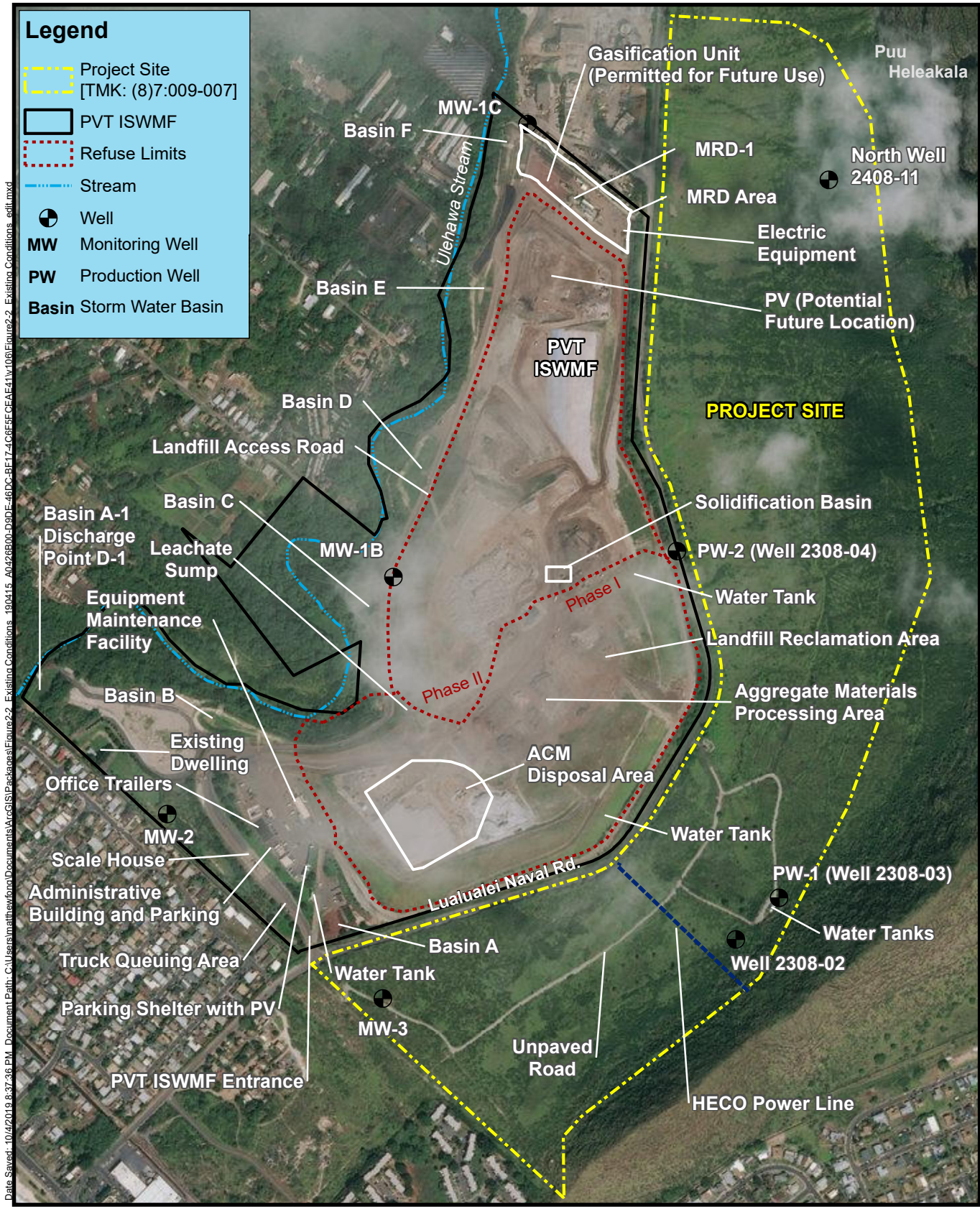
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Source: Anthology 2018

## Oahu Construction & Demolition Debris Management

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-1

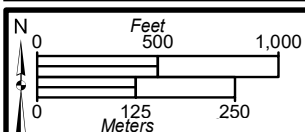
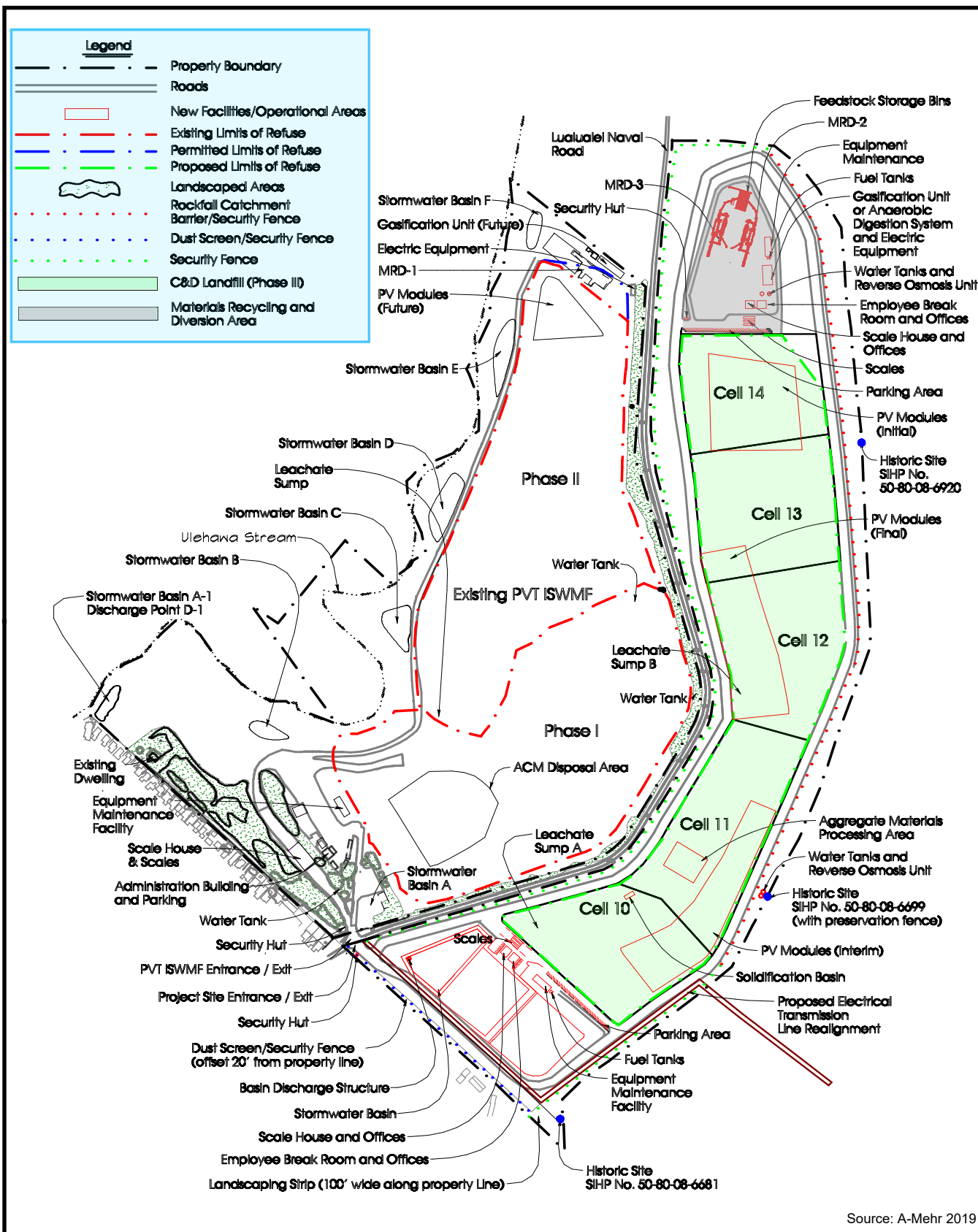




Date Saved: 10/4/2019 8:37:36 PM Document Path: C:\Users\mathew\Documents\ArcGIS\Projects\Figure2-2 Existing Conditions - 100415\_A042600-D9DE-46DC-BE74-C6F5CEAE41\106\Figure2-2 Existing Conditions - edit.mxd

	<p><b>Existing Conditions</b></p> <p>PVT ISWMF Relocation</p> <p>Nanakuli, Waianae District, Oahu, Hawaii</p>	<p>Figure</p> <p><b>2-2</b></p>
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Source: A-Mehr 2018, Aerial photograph provided by Hexagon Imagery Program Data.



**Project Site Development Plan**  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-3



**Description of Major Operational Areas and Structures Identified on the Site Development Plan (Figure 2-3) for the Project Site and the PVT ISWMF**

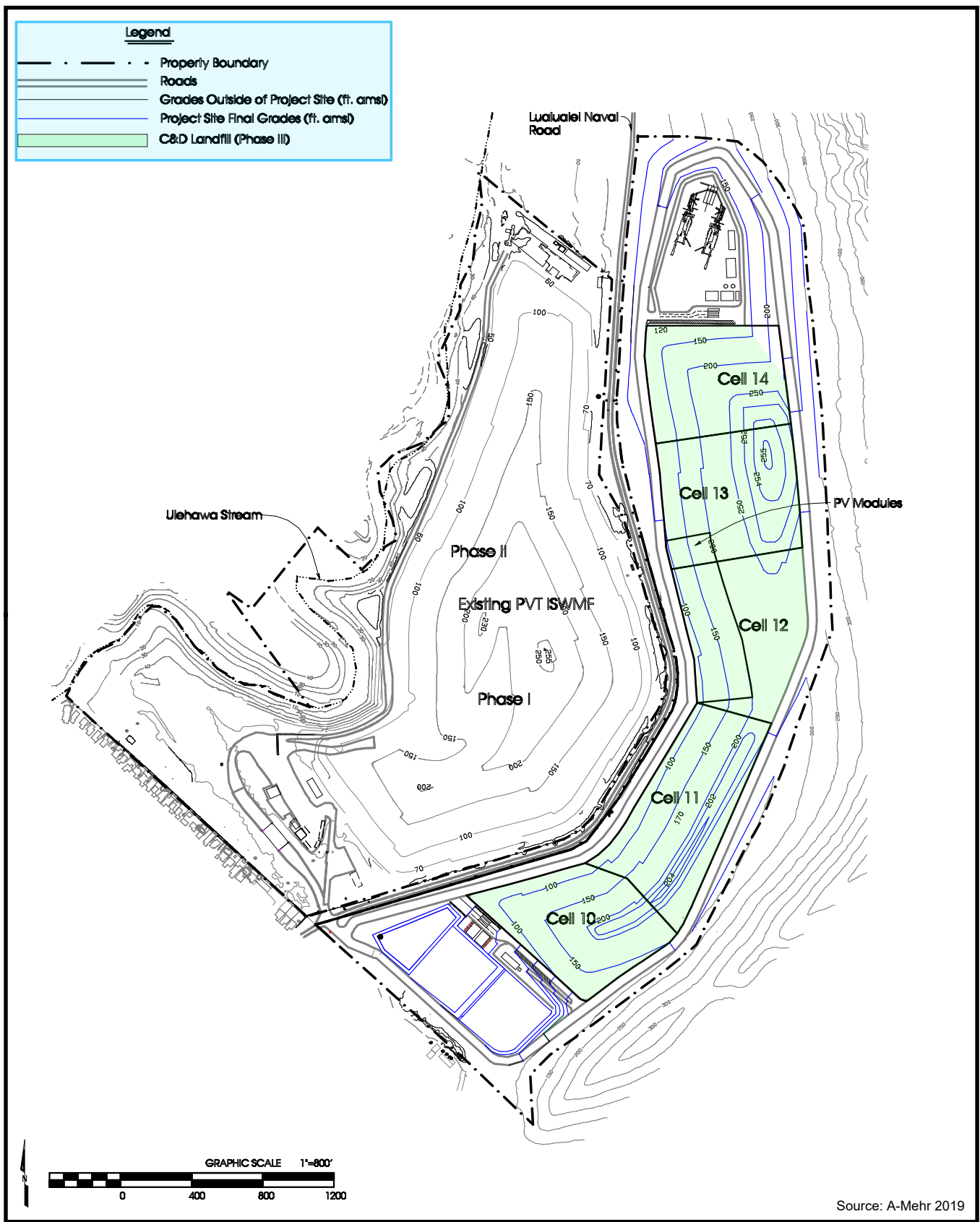
<u>Callout</u>	<u>Revisions</u>
Employee Break Room <u>and Offices</u>	<b><u>Combined office / employee break room trailers. One is located in the north/MRD area and one in the south area.</u></b> Temporary, covered area with tables for use by the employees during breaks and lunch.
Office Trailers	Temporary office trailers located in the north/MRD area and in the south area.
Scale House <u>and Offices</u>	Combined office / scale house trailers. One is located in the north/MRD area and one in the south area.
Water Tanks <u>and Reverse Osmosis Unit</u>	Containers for storing non-potable water used for dust control. <b><u>Location of a reverse osmosis unit to convert non-potable, brackish well water into potable water.</u></b>

<b>Project Site – Post-Relocation</b>	
<b>Callout</b>	<b>Description</b>
Aggregate Materials Processing Area	Area in which uncontaminated rock, concrete, and asphalt rubble would be crushed to produce aggregate materials for use in permanent and temporary landfill construction.
Anaerobic Digestion System	Renewable energy unit that would convert a fuel crop/feedstock mixture into a biogas. An internal gas engine converts the biogas into energy. The system would produce approximately 45,000 kWh of electrical power per day.
Basin Discharge Structure	In an extreme rain event, stormwater from the stormwater basin would be conveyed under Lualualei Naval Road, via an underground pipe and discharge into the existing Stormwater Basin A-1.
C&D Landfill (Phase III)	Five lined landfill cells for disposal of C&D refuse (75 acres).
Dust Screen / Security Fence	15 ft. tall dust screen and chain-link fence along southern border of the property.
Electric Equipment	Covered area for the PV inverter and battery storage system, back-up generators and HECO electrical equipment.
Employee Break Room	Temporary, covered area with tables for use by the employees during breaks and lunch.
Equipment Maintenance Facilities	Temporary, covered area for the maintenance of large equipment. One covered area is located in the northern/MRD area and one in the southern area.
Feedstock Storage Bins	Three units to store finished feedstock product prior to haul out.
Fuel Tanks	Portable, above-ground fuel tanks containing diesel and gasoline for on-site use. Fuel tanks would be in the northern/MRD area and in the southern area.

<b>Project Site – Post-Relocation</b>	
<b>Callout</b>	<b>Description</b>
Gasification Unit	Unit that would covert feedstock into a syngas. An internal gas engine would convert the syngas into energy. The system is designed to produce between 7,200 and 24,000 kWh of electrical power per day, depending on PVT's power needs.
Historic Site SIHP No. 50-80-08-6920	A small, roughly circular, stacked rock mound located on the lower western slope of Puu Heleakala on the eastern upslope boundary of the Project Site, outside of the Proposed Action development area.
Historic Site SIHP No. 50-80-08-6699 (with Preservation Fence)	A small pahoehoe basalt rock shelter located upslope of the two water tanks, outside of the Proposed Action development area. A 3 ft. tall and 115 ft. long fence is required by the Preservation Plan.
Historic Site SIHP No. 50-80-08-6681	A concrete bunker of 13 square ft. is located close to the southeastern corner of the Project Site, outside of the Proposed Action development area.
Landscaped Areas	Landscaping of the setback and buffer areas would beautify the site, minimize visual impacts on neighboring properties, and reduce dust.
Landscaping Strip	A 100-foot wide corridor at the southern boundary would be landscaped with drought-tolerant vegetation.
Leachate Sump	Collects leachate generated in the lined Phase III landfill area. Two leachate sumps are proposed: one for Cells 10 and 11 and a second for Cells 12, 13 and 14.
Materials Recycling and Diversion (MRD) Area	The 10-acre area would be used to recover and recycle incoming waste streams and is the location of the MRD-2 and MRD-3 processing lines.
MRD-2 and MRD-3	Equipment consisting of a series of vibrating screens, sorting lines, shredder and screening system would be used to recover recyclables from C&D debris and produce feedstock.
Office Trailers	Temporary office trailers would be located in the northern/MRD area and in the southern area.
Parking Area	40 employee parking stalls would be located in the northern/MRD area and 40 employee parking stalls located in the southern area.
Project Site Entrance / Exit	Driveway entrance to the Project Site would be located on Lualualei Naval Road opposite PVT ISWMF.
Property Boundary	Indicates the TMK parcel boundary of the PVT ISWMF and the Project Site.
Proposed Electrical Transmission Line Realignment	A 44-kilovatt overhead power line crosses the southern portion of the Project Site and would be relocated as part of the Proposed Action.
PV Modules (Initial)	Initial location for a 7-acre PV system.
PV Modules (Interim)	Interim location for a 7-acre PV system.
PV Modules (Final)	Final location for a 7-acre PV system.
Roads	Internal roads to be used by PVT staff and customers to access various operations within the Project Site.
Rockfall Catchment Barrier / Security Fence	Comprises of (1) rock catchment areas between the adjacent

Project Site – Post-Relocation	
Callout	Description
	slopes and the Project Site, (2) rock fences constructed of large steel posts and steel cables to function as rock restraints, and (3) 6 ft. tall chain-link fence for access control.
Scale house	Combined office / scale house trailers. One office trailer would be in the northern/MRD area and one in the southern area.
Scales	A set of large scales mounted permanently on a concrete foundation, that would be used to weigh vehicles and their contents. One scale would be in the northern/MRD area and one in the southern area.
Security Fence	6-feet tall fence along the northern and western borders of the Project Site to control access.
Security Hut	Potable hut that would provide shade for security personnel and equipment. One would be in the northern/MRD area and one at the site entrance.
Solidification Basin	A portion of Cell 10 would be used for solidification of non-hazardous liquid wastes before they are buried in the landfill (Initial Site).
Stormwater Basin	A stormwater sedimentation / retention basin would be utilized to manage storm water runoff to prevent flooding and downstream erosion.
Water Tanks	Containers for storing non-potable water that would be used for dust control.

PVT ISWMF – Post-Relocation	
Callout	Description
ACM Disposal Area	Existing area for disposal of Asbestos Containing Material (ACM). ACM disposal will cease when the permitted capacity is met.
Administrative Building and Parking	House administrative and management personnel to manage closure and post-closure activities.
C&D Landfill (Phase I & II)	Waste disposal will cease when Phase I and II meets capacity. Landfill cells will be closed in accordance with PVT's <i>Closure Plan</i> .
Electrical Equipment	Covered area for the PV inverter and battery storage system, back-up generators, and HECO electrical equipment.
Equipment Maintenance Facility	A temporary, covered area for the maintenance of large equipment.
Existing Dwelling	An existing, permitted building (BP # 518659) for the storage of files and records.
Gasification Unit (Future)	Location for a permitted 300kW Gasification Unit.
Leachate Sump	Collects leachate generated in the lined Phase II landfill area.
MRD-1	Materials Recovery Device-1 retained as a back-up in case MRD-2 or MRD-3 are offline.
PV Modules (Future)	Location for a permitted 2-acre PV system.
PVT ISWMF Entrance / Exit	Driveway entrance (existing) to the PVT ISWMF site located on Lualualei Naval Road.
Scale House & Scales	Existing facility retained for back-up if scales are offline at the Project Site.
Security Hut	Portable guard hut (existing) located at the PVT ISWMF entrance.
Storm Water Basins (A-F) and Discharge Point D-1	Six storm water sedimentation / retention basins (existing) will remain onsite to manage stormwater runoff to prevent flooding and downstream erosion. Stormwater from the Proposed Action will be diverted into Stormwater Basin A-1 and discharged into Ulehawa Stream at the existing Discharge Point D-1.
Water Tanks	Four existing water tanks will remain on-site for use in the case of a fire.



**Maximum Elevations**  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-4

### 1 DIRT BARRIER

The soil beneath the landfill is graded toward the center of the planned landfill cell. The subsequent liner layers retain that slope to direct leachate to a collection point.

### 2 GEOSYNTHETIC CLAY LINER

GCL is an impervious layer that prevents leachate from entering the soil and ground water beneath the liner system.

### 3 HIGH-DENSITY POLYETHYLENE (HDPE) PLASTIC

HDPE is a flexible, 60-millimeter thick plastic that is as hard as roofing shingle. HDPE is rolled out in wide sheets and welded together in place.

### 4 GEOTEXTILE LINER

To protect the HDPE from damage due to rocks and debris placed in the landfill cell, it is covered with highly durable, 16-ounce weight geotextile fabric.

### 5 GRAVEL

A 12-inch layer of gravel allows liquids to flow toward the center of the landfill, where drainage can occur. Once the gravel is spread, another layer of geotextile fabric is rolled into place.

### 6 DIRT OR PERMITTED ASH

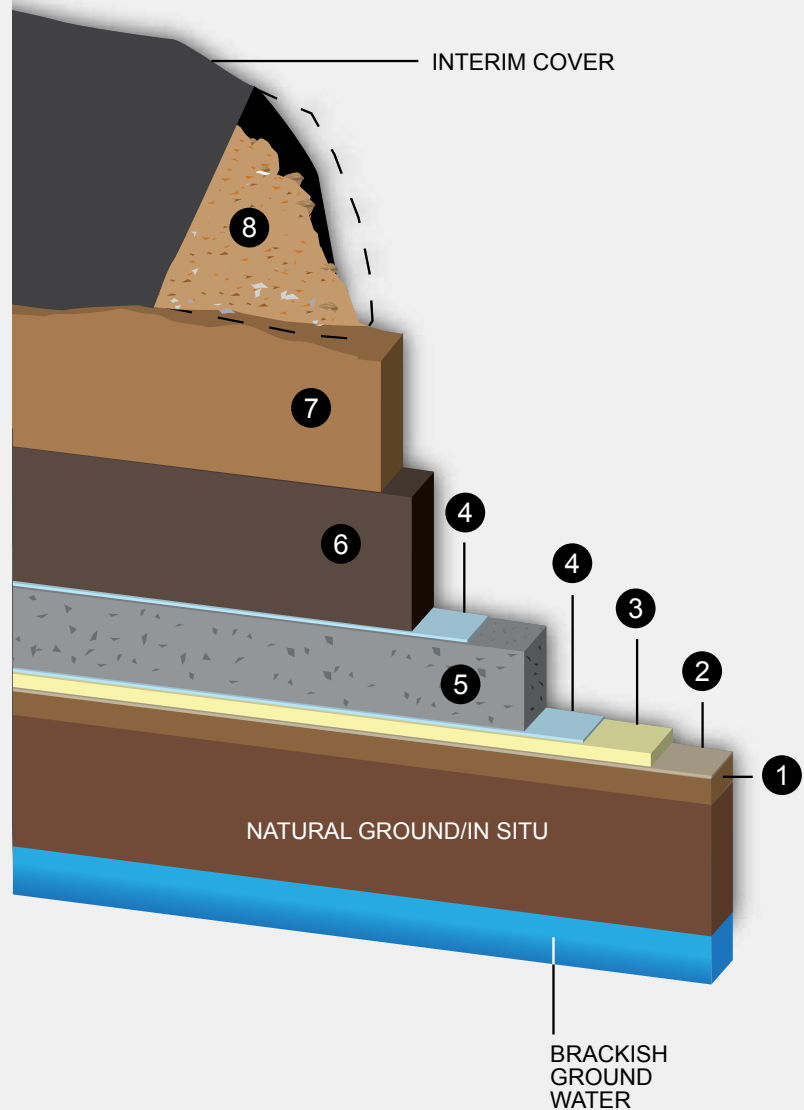
Two feet of fine-grained dirt or ash is spread on the last layer of geotextile. This layer, because it is fine-grained, is more resistant to penetration from wood and other debris and is a fire barrier.

### 7 SOIL

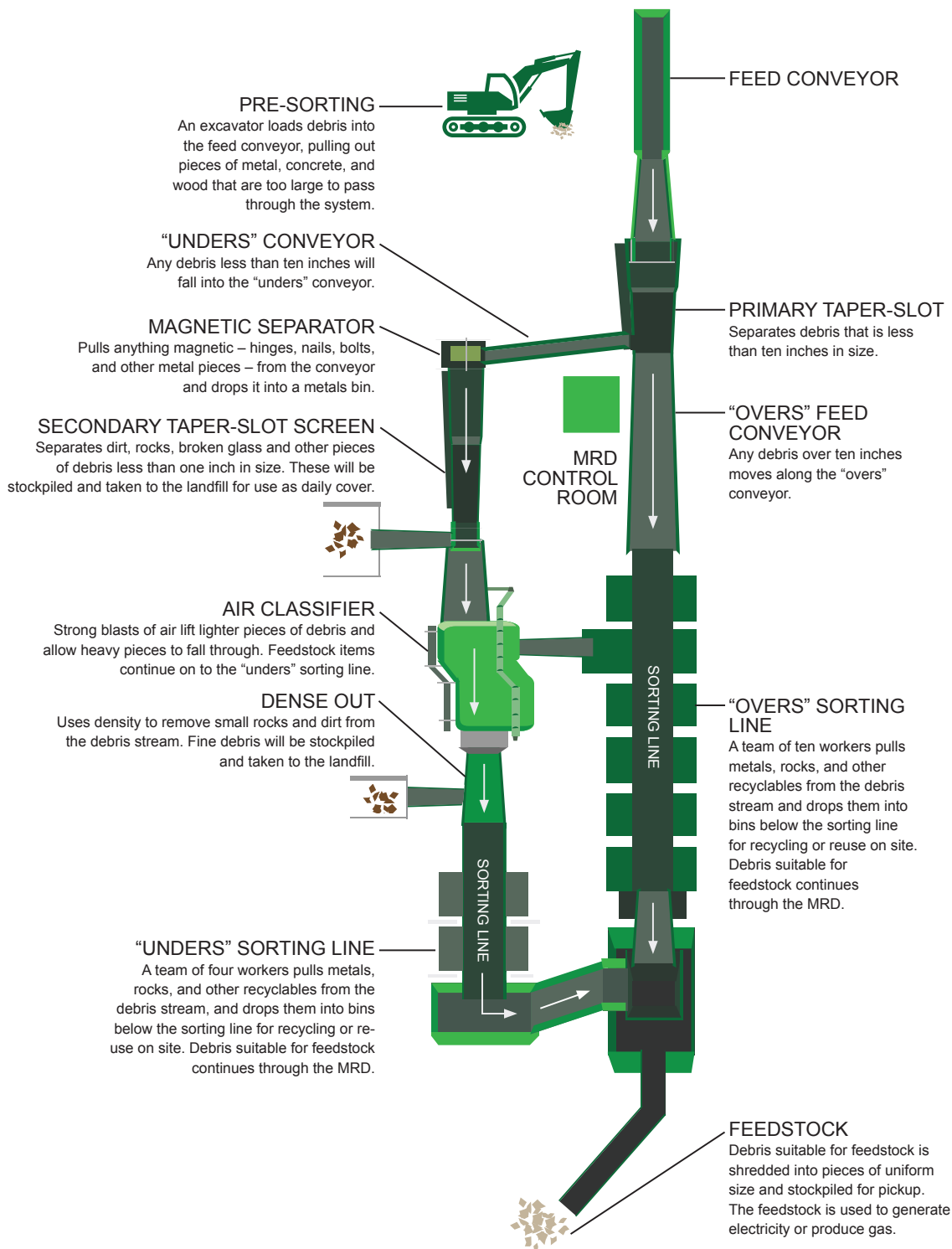
The final layer is two feet of soil and is referred to as the "driving layer" because it protects the liner system from the heavy equipment and truck traffic.

### 8 C&D SELECT WASTE

Select debris that is unlikely to pierce or penetrate the landfill liner is placed at the bottom of the newly created landfill cell.



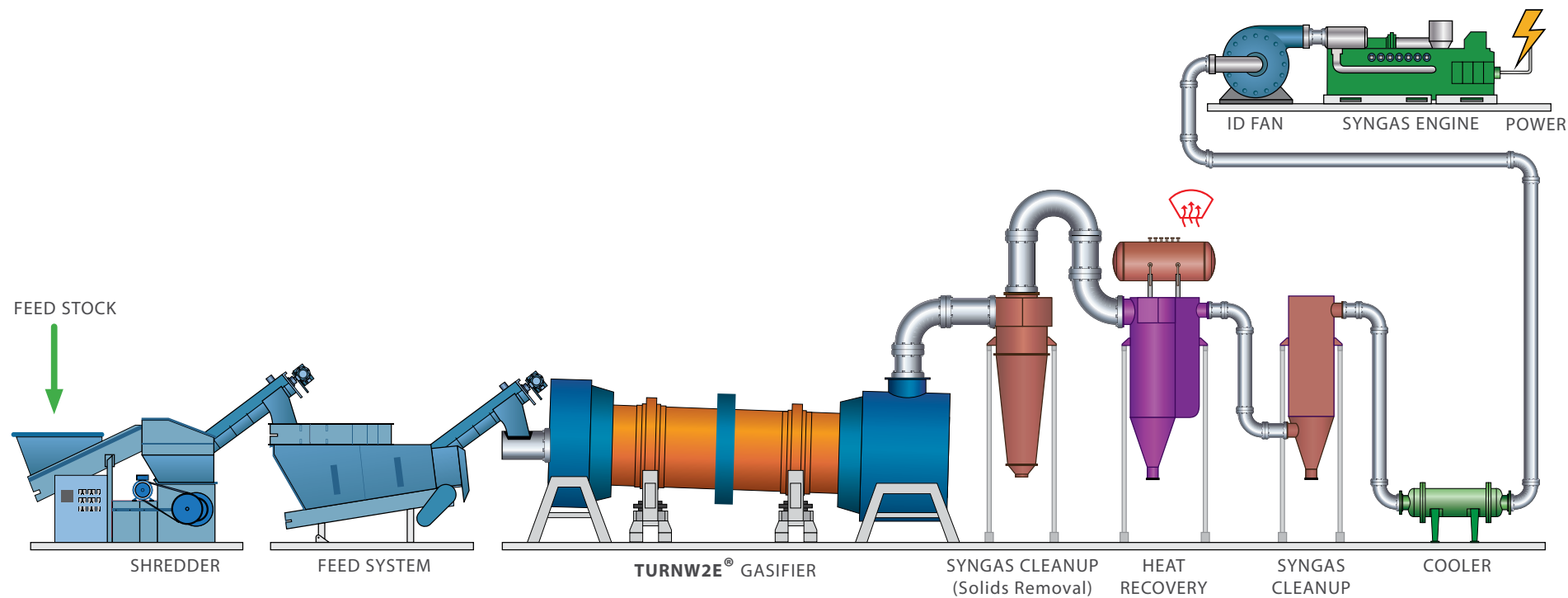
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Source: Anthology 2018



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Source: Anthology 2018

**Materials Recovery Device**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**2-6**

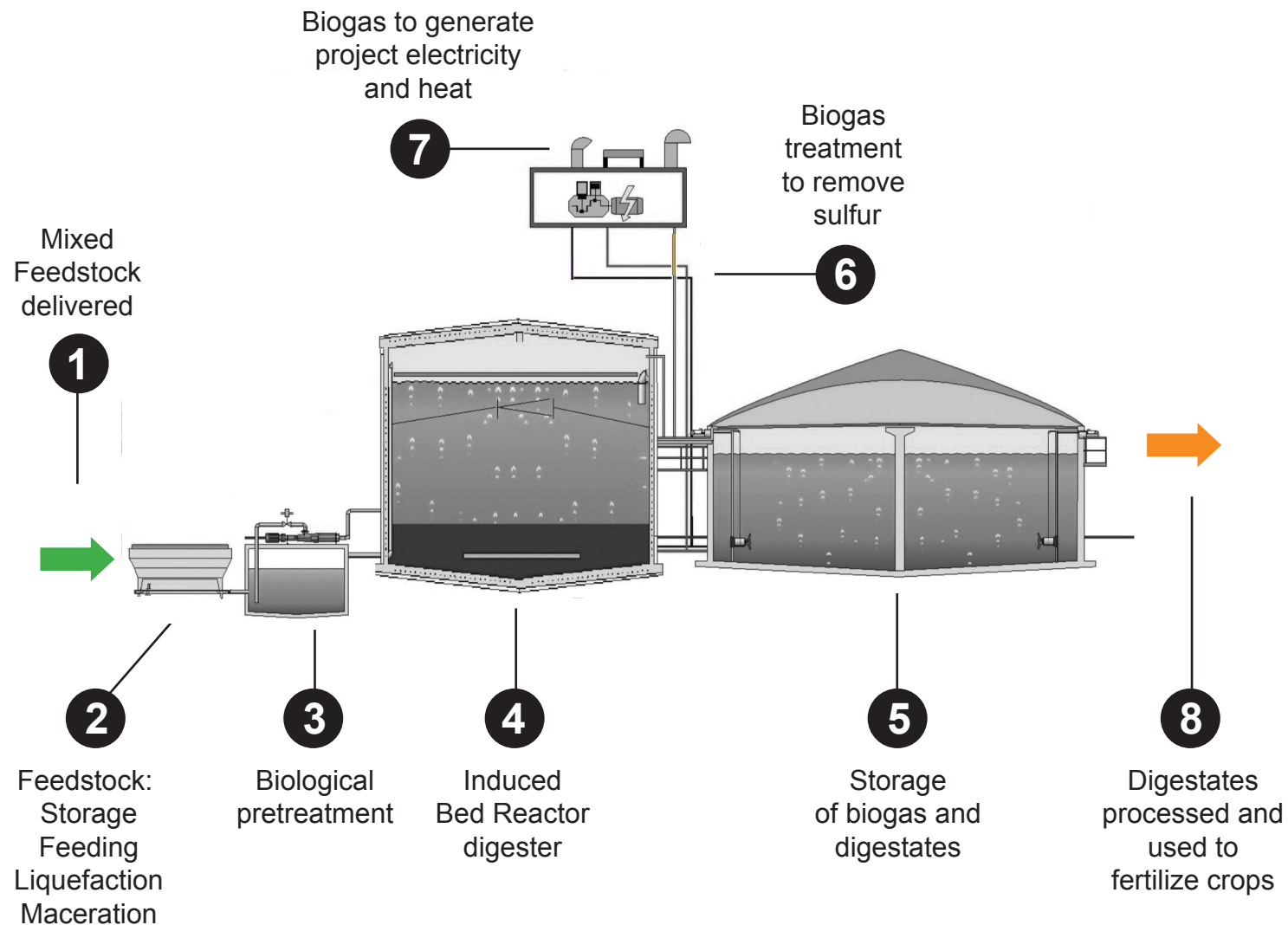


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 Source: CH4AG 2018

**TURNW2E Gasification Process**  
 PVT ISWMF Relocation  
 Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**2-7**





Not to scale  
Source: CH4AG 2018

**Anaerobic Digestion Process**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**2-8**

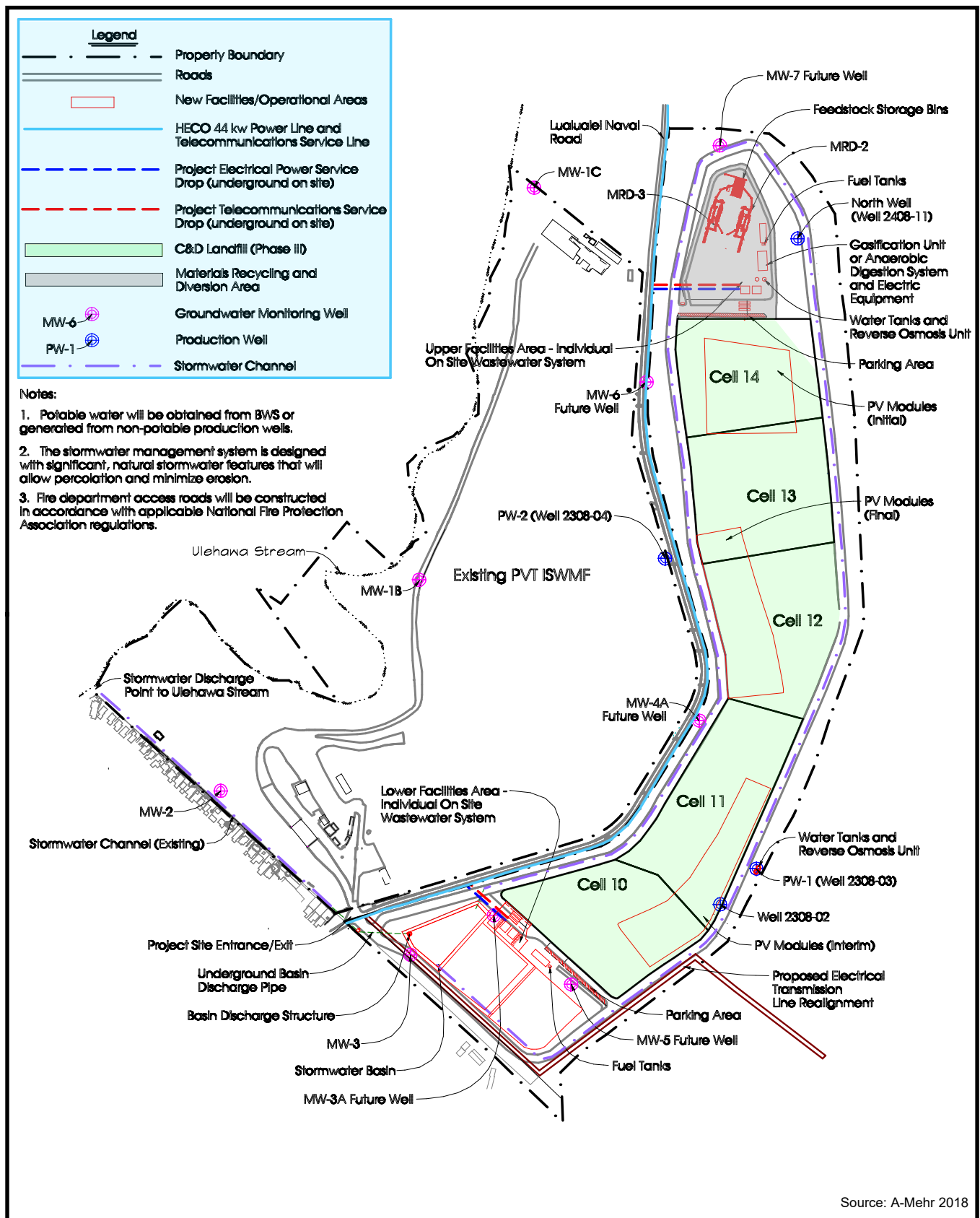
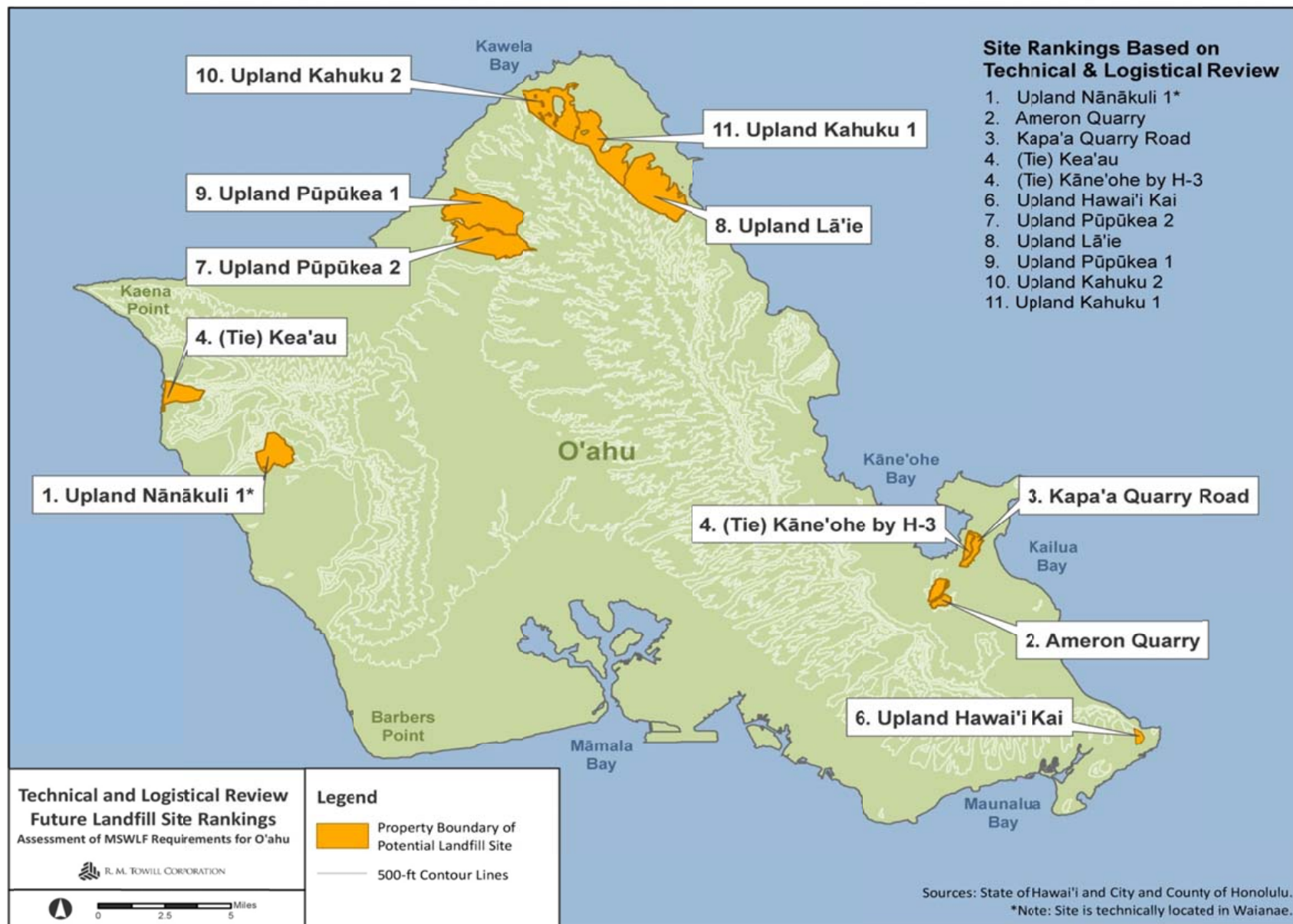


Figure  
2-9

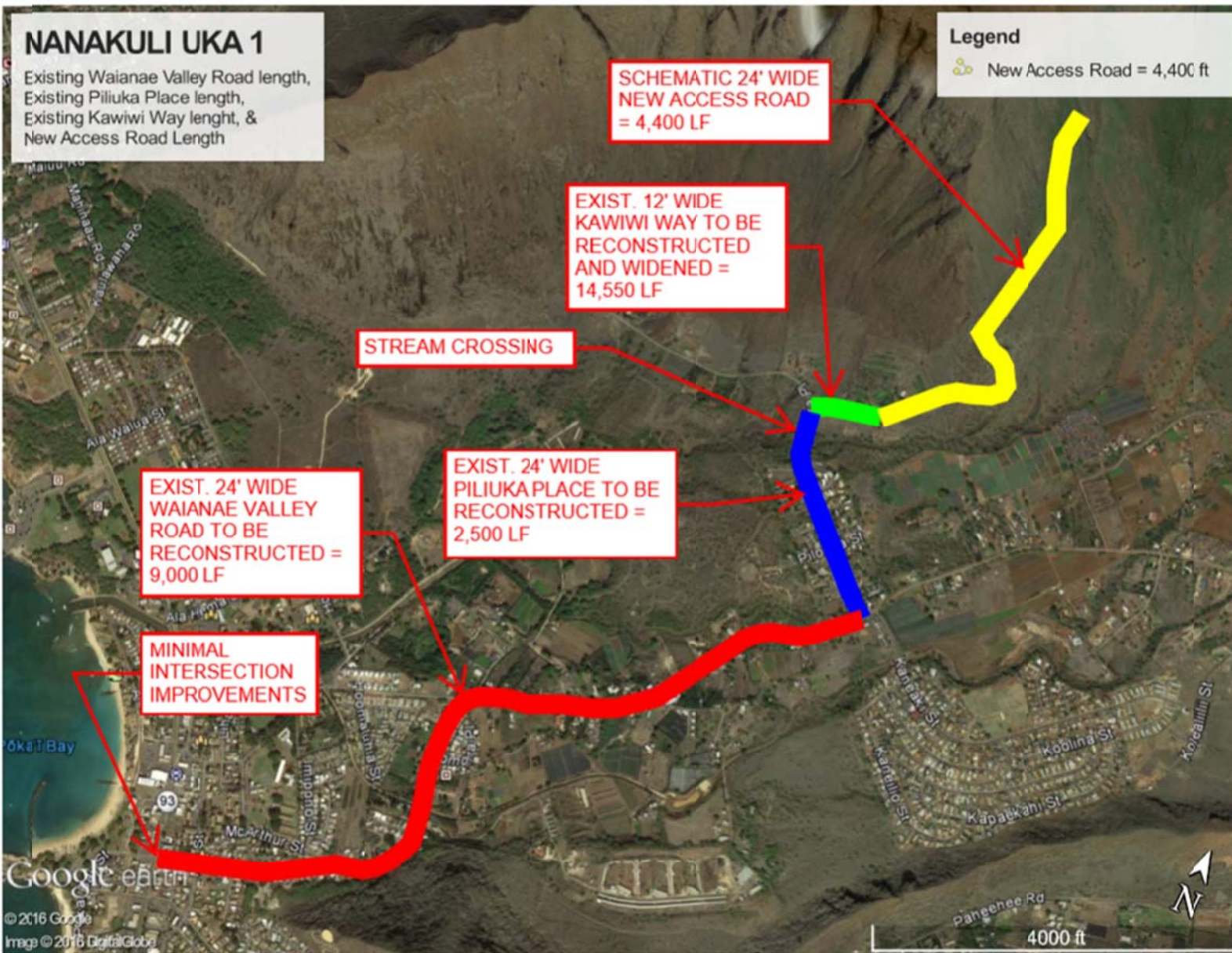


## Alternative Site Locations and Rankings from 2017 CCH ENV Study

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-10



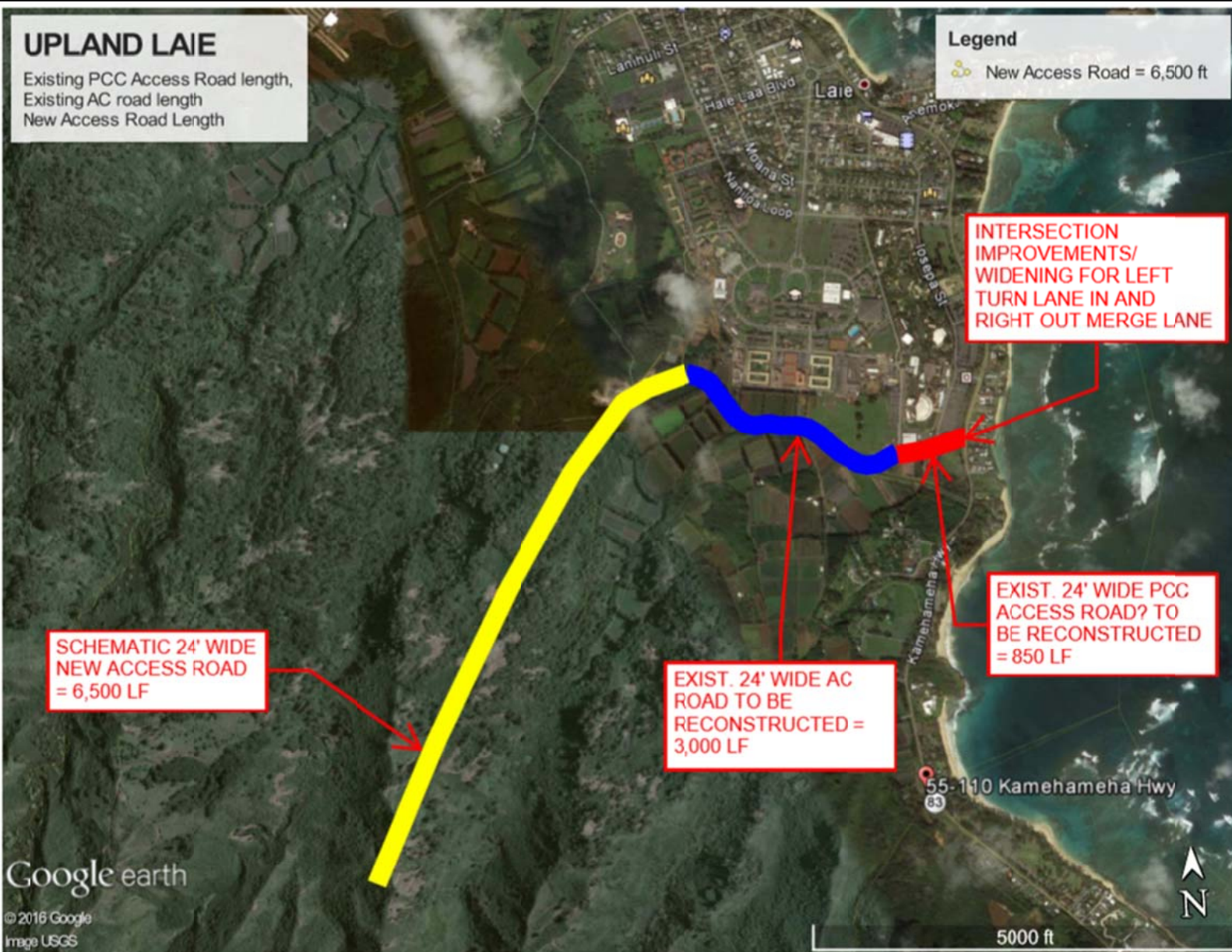


## Required Roadway Improvements for Development of Upland Nanakuli 1 (Waianae Valley) Site

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-11





## Required Roadway Improvements for Development of Upland Laie Site

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
2-12

### 3 NATURAL ENVIRONMENT

#### Section Contents

3.1	Climate and Rainfall.....	3-3
3.2	Topography, Geology, and Soils .....	3-9
3.3	Natural Hazards .....	3-12
3.4	Water Resources .....	3-22
3.5	Air Quality.....	3-31
3.6	Noise.....	3-53
3.7	Biological Resources .....	3-60

The following revisions were made to Section 3 in the Final EIS in response to the Draft EIS comments.

Section	Page	Revisions
3.1.3.1	3-8	<u>Less than 10% of the site would be covered with impervious surfaces and unused areas of the landfill area will be seeded with buffelgrass and guinea. The water used for dust control results in transeaporation, which reduces heat in the area. The Proposed Action is not anticipated to increase surface heat in the area.</u>
3.4.3.1	3-29	<u>The Proposed Action is not anticipated to contribute to plastic debris or microplastic (plastic debris less than five millimeters in length) pollution of nearby surface and marine waters. C&amp;D debris does not contain large amounts of plastic and most plastic materials are segregated from the waste stream and used as feedstock for renewable energy providers. PVT implements a litter control program to minimize wind-blown litter. Microplastics come from a variety of sources, including from larger plastic debris that degrades into smaller and smaller pieces. The landfill liner prevents degrading plastic debris from entering ground or surface water. The stormwater basin would be covered with synthetic turf, a potential source of microplastics. A 2018 European Commission study found that artificial turf with infill material (used to cushion sports fields) has been linked to microplastic pollution (Hann et al. 2018). Artificial turf for non-sport applications does not to contain plastic infill material as it is both costly and as locally derived sand serves the same purpose. The pile fibers may wear or break and form microplastics, but this is expected to be minimal compared with sports turf that is subject to a great deal more abrasion. The stormwater infiltration gallery and underlying soils (coral/coralline gravel w/sand and silts) also serves to filter out any microplastics.</u>

3.5.2.4	3-49	<i><u>Hydrogen sulfide (H<sub>2</sub>S) is a flammable, colorless gas with a characteristic rotten-egg-like odor. Humans can detect hydrogen sulfide odors at very low levels in air [i.e. 8 ppb], generally below levels that would cause health effects (EPA 2014). Hydrogen sulfide may be formed in a landfill environment through the reduction of sulfate (SO<sub>4</sub><sup>2-</sup>) by sulfate-reducing bacteria. There are several contributing factors that may result in the production of hydrogen sulfide in C&amp;D landfills (EPA 2014). Moisture control is recommended by the US EPA to prevent the formation of hydrogen sulfide. The Project Site is in an area of low rainfall. C&amp;D debris is characteristically dry and has little or no active organic material. PVT implements best management practices to reduce moisture in the landfill as described in Section 2.5, Description of the Proposed Action. PVT has surveyed the existing landfill for landfill gases and has never detected hydrogen sulfide.</u></i>
3.5.3.1	3-52	<i><u>The anaerobic digestion system and the gasification unit would be fed with non-odorous feedstock and/or fuel crops and are not anticipated to generate odors.</u></i>
3.6.1	3-53	The CadnaA noise prediction software by DataKustik GMBH was used to predict the likely operational noise effects to receptor locations surrounding the Project Site (Figure 3-22). The sound propagation model is based on the International Standards Organization (ISO) 9613, Part 2, which is a standard for calculating outdoor noise propagation. <i><u>The input parameters for the sound propagation model are summarized in Appendix D and included site topography, ground absorption, and meteorological conditions. The sound propagation models were created with a conservative approach that assumed worst case scenarios. Parameters were set for predictions of noise levels based on all sources of noise operating simultaneously and continuously through the operational time period.</u></i>
3.6.3.1	3-58	<i><u>The proposed gasification unit and anaerobic digestion system are designed to operate continuously. During non-operational hours, the renewable energy system would operate in idle mode and would not produce power. On idle mode, the BESI TURNW2E gasifier would have less than 45 dba sound level (Mathew 2019). The noise generating components of the anaerobic digestion system would be located indoors and operate at noise levels below 40 dba (Pritchard 2019). The gasification unit or anaerobic digestion system would be located at the north end of the Project Site and the nearest property line maximum permissible nighttime noise levels is 70 dBA for Agriculture. DL Adams does not anticipate a significant nighttime noise impact (Patrick 2019).</u></i>

## 3.1 Climate and Rainfall

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on climate and rainfall.

### 3.1.1 Methodology

Climate is defined as long-term averages and variations in weather measured over a period of time. A change in the state of the climate can be identified by changes in the mean and/or variability of its properties that persist for an extended period, typically decades or longer (Tetra Tech 2018).

Existing climate characteristics were obtained from the following key sources:

- PVT ISWMF meteorological station: In conformance with PVT's SWMP No. LF-0061-15, PVT established a remote continuous monitoring station that records rainfall, wind speed and direction, temperature, humidity, and solar radiation. The PVT ISWMF weather station is located on the PVT ISWMF administrative office trailer (Degree: 21.3926313° N, 158.148296° W) at an elevation of approximately 60 feet amsl. It is the closest weather station to the Project Site. The closest National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS) locations are the Kalaeloa Airport/Oahu (PHJR) (Degree: 21.31° N, 158.07° W, Elevation: 33 feet amsl) and Wheeler Air Force Base/Oahu (PHHI) (Degree: 21.48° N, 158.03° W, Elevation: 837 feet amsl) at eight and nine miles respectively.
- *Evapotranspiration of Hawaii* final report and associated online data (Giambelluca et al 2014). The report is a compilation and assessment of climate characteristics (e.g., rainfall, wind speed, solar radiation, humidity, evaporation, temperature) from various sources. The data was collected specifically to extrapolate evapotranspiration rates by location using the Penman-Monteith model. The climate data is available in many forms, including an online interactive mapping tool for all major Hawaiian Islands.  
(<http://evapotranspiration.geography.hawaii.edu/interactivemap.html>)

The Office of the Mayor Directive No.18-01 of July 16, 2018 directs all CCH agencies to use the following documents to establish policies to address, minimize risks from, and adapt to the impacts of climate change and sea level rise:

- CCH Climate Change Commission's *Sea Level Rise Guidance* and *Climate Change Brief*, adopted June 5, 2018. The *Climate Change Brief* establishes the factual basis and broad impact of climate change, as documented by peer-reviewed scientific literature and credible empirical data sources.
- *State of Hawaii Sea Level Rise Vulnerability and Adaptation Report* (CCMAC 2017), prepared by the Hawaii Climate Change Mitigation and Adaptation Commission.



The *2018 State of Hawaii Hazard Mitigation Plan Update* (draft) prepared by Tetra Tech for the Hawaii Emergency Management Agency provides additional climate change data (Tetra Tech 2018).

This EIS Section focuses on current climate characteristics, including observed changes to climate attributed to global warming. Weather-related hazards (current and forecasted) attributed to global warming are discussed in Section 3.3, *Natural Hazards*. The Proposed Action's potential greenhouse gas emissions are addressed in Section 3.5, *Air Quality*.

### **3.1.2 Existing Conditions**

#### **3.1.2.1 Climate and Rainfall**

The climate of Oahu is subtropical, characterized by mild temperatures throughout the year, moderate humidity, prevailing northeasterly trade winds, significant differences in rainfall within short distances, and infrequent severe storms. Another primary characteristic of Oahu's climate is the presence of only two seasons: a dry season generally occurring between May and October, and a wet season generally occurring between October and April (Juturna 2019).

Oahu's mountain ranges influence weather and climate. The mountains obstruct, deflect, and accelerate the flow of air. The prevailing winds are the northeast trades. The warm, moist air rises over the windward coasts and encounters the Koolau Mountains where most of the clouds and rainfall occur. The remaining moisture is released at the Waianae Range before the wind descends into the southwestern portion of the island, Leeward Oahu. The regional climate is characterized as hot and dry at the lower elevations of the Waianae Coast (BWS 2009). Rainfall in Leeward areas is seasonal, with most rainfall occurring from a few winter storms. Summers are dry.

PVT provided data collected from the PVT ISWMF weather station for years 2006 to 2018 (PVT 2019). The data is recorded to two decimal places but is rounded to whole numbers in Table 3-1.

The average temperature between 2006 and 2017 was 77 °F, ranging from an average low of 72 °F to an average high of 83 °F (Table 3-1). The average annual temperature appears to have increased in the last 4 years to 78 °F. Most of the annual precipitation falls between October and March, averaging 1 to 2 inches per month. However, the rainfall is generally less than 1 inch per month the rest of the year. The average annual rainfall from 2006 through 2018 was 12 inches. The maximum rainfall recorded in one day was 6 inches in January 2011 (Table 3-1). No trends in average annual rainfall are apparent during the 2006 through 2018 interval. The wind is generally from the northeast at a consistently low speed of 5 mph but gusts of wind between 40 and 60 mph are common throughout the year. The highest wind speed recorded between 2006 and 2017 was 79 mph in 2018 (Table 3-1).

**Table 3-1 PVT ISWMF Station Climate Data 2006-2018**

Year	Annual Temperature (°F)			Rainfall (inches)		Wind Speed (mph)/ Wind Direction	
	Minimum Average	Maximum Average	Annual Average	Total Annual	Maximum in 24 hours	Average	Maximum
2006	72	82	77	20	3	5/N-NE	49/SE
2007	72	83	77	13	3	5/E	54/E
2008	71	82	77	19	5	5/E	51/E
2009	72	81	76	6	1	5/NE	56/N-NE
2010	72	81	76	14	3	5/NE	50/NE
2011	71	83	77	18	6	4/NE	52/NE
2012	71	82	76	6	1	5/NE	55/NE
2013	72	83	77	14	2	5/N	68/N
2014	72	83	77	7	1	5/N	50/N
2015	73	83	78	13	2	6/N	51//E
2016	73	84	78	5	1	5/N	55/N
2017	72	84	78	15	2	5/NE	60/N
2018	73	84	78	11	2	5/NE	79/NE
Average	72	83	77	12	2	5/NE	56/NE

N = North; E = East; S = South

Source: PVT 2019.

Table 3-2 presents data that was not collected at or near the Project Site or field verified; however, the data was compiled from various published sources that are often relied upon when describing weather characteristics across Hawaii, including the evapotranspiration study (Giambelluca et al 2014). The average annual temperature of 75 °F is 2 degrees lower than the site-specific 77 °F recorded by PVT. The average annual rainfall of 26 inches is more than twice the actual rainfall of 12 inches recorded by PVT. The 5-mph wind speed is consistent between the two data sources. The Project Site is warmer and much drier than generally reported in other sources (Table 3-2).

As part of the hydrologic cycle (movement of water), water is released from plants and soils in the form of water vapor that becomes available to form clouds and rain. Quantifying the hydrologic cycle helps to manage land use and water resources. Based on the Penman-Monteith model, the average annual loss of water from the Project Site due to evapotranspiration is estimated at 82 inches (Table 3-2). An average annual rainfall of 26 inches (Table 3-2) results in an annual average deficit of 56 inches of rainfall. If the actual PVT rainfall data were applied, the deficit would be greater. The modeled data is approximate, based on many variables and sources of existing data, but the finding of a water deficiency is consistent with the vegetation observed on the Project Site (Section 3.7, *Biological Resources*), the lack of historical agricultural activity at the Project Site (Section 6.2.2.7, *Agricultural Productivity Ratings*), and the risk of wildfire, such as the

March 2019 wildfire that burned 500 acres of Leeward Oahu, including the Project Site (Star Advertiser 2019).

**Table 3-2 Climate Data from Other Sources**

Characteristic	Project Site Average Annual	Compared to PVT ISWMF Station (Table 3-1)
Air Temperature	75 °F	77 °F
Rainfall	26 inches	12 inches
Windspeed	5 mph	5 mph
Solar radiation	5 kWh/m <sup>2</sup> /day	9.4 kWh/m <sup>2</sup> /day
Relative humidity (i.e., amount of water vapor in the air)	71%	N/A
Penman-Monteith Evapotranspiration	82 inches	N/A

N/A = not available; kWh/m<sup>2</sup> = kilowatt hour per square meter.

Source: Giambelluca et al 2014.

### 3.1.2.2 Climate Variations

#### El Nino Southern Oscillation Cycle

Hawaii's climate is greatly influenced by the El Nino Southern Oscillation Cycle, which refers to temperature fluctuations between the ocean and the atmosphere in the Equatorial Pacific. El Nino refers to the above average sea surface temperature events and La Nina refers to the below average sea surface temperature events. These events represent deviations from normal surface water temperatures and have large effects on global and State climate. The duration and frequency of these events is variable (Tetra Tech 2018).

Relative to "normal" conditions, an El Nino is characterized by less rainfall during winter months, weaker trade winds, increases in sea level, coastal erosion, and drought. In contrast, La Nina is characterized by stronger trade winds, cooler temperatures, and more rainfall over a longer rainy season (Tetra Tech 2018).

Notable El Nino episodes occur irregularly at intervals of 2 to 7 years but the average has been 2 to 3 episodes per decade (National Weather Service 2019). Notable El Nino episodes in the last three decades occurred in the years: 2018-2019, 2014-2016, 2009-2010, 1997-1998, 1991-1992, and 1986-1988.

La Nina episodes occur every 3 to 5 years but can occur over successive years. Notable La Nina episodes in the last three decades occurred in the years: 2016, 2010-2011, 2007-2008, early 2006, 1999-2000, 1995-1996, and 1988-1989 (National Weather Service 2019).

## **Global Warming**

Excess heat, trapped by greenhouse gas emissions (e.g., carbon dioxide, methane, nitrous oxide, and fluorinated gases) in the atmosphere, is causing dramatic changes in ecosystems, the ocean, weather patterns, and other climate-dependent aspects of the Earth's surface. The greenhouse gas emissions from human activities, primarily from the burning of fossil fuels, are causing the global climate to change 170 times faster than natural forces (CCH 2018b).

The U.S. greenhouse gas emissions per capita are over three times the world average. Carbon dioxide accounts for approximately 91% of the U.S. greenhouse gas emissions. Hawaii's carbon dioxide emissions are 20% lower than the national average, but twelve times greater than the other Pacific islands (CCH 2018b).

In 2007, Hawaii's contribution to greenhouse gas emissions was 24 million metric tons of carbon dioxide equivalent. Hawaii's contribution to carbon dioxide emissions is declining due, in part, to legislation for zero emissions by 2045. Other state initiatives signed into law include Acts 15 and 16 SLH 2018, establishing a Greenhouse Gas Sequestration Task Force and a Carbon Offset Program, respectively (CCH 2018b).

The global air temperature increased 1.8 °F since the late 19th century. The projected median global increase is 5.76 °F this century (CCH 2018b).

Over 90% of the heat trapped by greenhouse gases since the 1970's has been absorbed by the oceans and today the oceans absorb heat at twice the rate they did in the 1990's. Global sea surface temperature is rising, and the oceans are warming rapidly (CCH 2018b).

The statewide average air temperature has risen 0.76 °F over the past 100 years with 2015 and 2016 being the warmest years on record. The PVT data (Table 3-1) shows the average annual temperature increased approximately 1 °F in 2015 to 78 °F and remained at that temperature through 2018. The projected increase in average air temperature over land in Hawaii ranges between 1.8 to 7.2 °F by the end of this century. The greatest warming is projected for high elevations and the leeward areas of the major islands. Average daily wind speeds are declining (CCH 2018b).

Hawaii rainfall overall has declined over the past 30 years in both wet and dry seasons but there is geographic variability. The projections of rainfall changes related to climate change are varied, but overall dry areas are projected to become drier and the wet areas wetter. The leeward areas, including the Project Site, will likely have fewer clouds (increased solar radiation) and less rainfall (CCH 2018b).

The frequency of extreme El Nino and La Nina events is expected to double in this century resulting in weather shifts from one extreme to the other. This climate change-related variability in weather patterns is a challenge for projecting rainfall (CCH 2018b).

### 3.1.3 Impacts

#### 3.1.3.1 Proposed Action

The Proposed Action would have no short-term or long-term, direct or indirect impact on climate or local weather patterns. The Project Site would continue to be characterized as having relatively low rainfall, high solar radiation, and steady 4 to 5 mph winds with gusts of 40 to 60 mph. Less than 10% of the site would be covered with impervious surfaces and unused areas of the landfill area will be seeded with buffelgrass and guinea. The water used for dust control results in transeaporation, which reduces heat in the area. The Proposed Action is not anticipated to increase surface heat in the area.

Under the Proposed Action, the PVT ISWMF operations would relocate to the Project Site and remain relatively the same from an operations standpoint. PVT's operations generate negligible amounts of greenhouse gas (GHG) emissions and they would continue to reduce their reliance on energy sources that contribute to GHG (e.g., fossil fuels), as described in Section 3.5, *Air Quality*. The weather variability associated with El Nino/La Nina or global warming may increase the frequency of natural hazards associated with weather, as discussed in Section 3.3, *Natural Hazards*.

#### 3.1.3.2 No Action Alternative

The No Action Alternative would have no short-term or long-term, direct or indirect adverse impacts on climate characteristics. The Project Site would continue to be characterized as having relatively low rainfall, high solar radiation, and steady 4 to 5 mph winds with gusts 40 to 60 mph.

### 3.1.4 Summary of Impacts and Potential Mitigation

Neither the Proposed Action or No Action Alternative would have short-term or long-term, direct or indirect impacts on climate, rainfall or other weather characteristics. The projected impacts of climate change on the community and both alternatives are addressed in Section 3.3, *Natural Hazards*.

**Table 3-3 Climate and Rainfall Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Climate characteristics, including rainfall	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 3.2 Topography, Geology, and Soils

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on topography, geology, and soils.

### 3.2.1 Methodology

Juturna, LLC. (Juturna) prepared the *Geology, Hydrology and Water Quality Report for the PVT ISWMF Relocation* in March 2019, included as Appendix A. This report was the basis for the Existing Condition for topography, geology, and soils. Juturna's scope of work included:

- Reviewing existing geologic data from the literature;
- Reviewing site-specific data based on soil borings and test pits;
- Assessing Proposed Action impacts to groundwater and surface water; and
- Preparing the *Geology, Hydrogeology, and Water Quality Report*.

Figures in this section were excerpted from the *Geology, Hydrogeology, and Water Quality Report* (Juturna 2019).

This section assessed potential impacts related to changes in local topography and underlying soils that would result in soil erosion or geologic instability. See Section 3.5, *Air Quality* for potential impacts on fugitive dust. Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site.

### 3.2.2 Existing Conditions

The erosion of the Waianae shield volcano formed large valleys in Waianae, including Lualualei. Figure 3-1 shows the Regional Topography. The Lualualei Valley floor comprises approximately 14 square miles and is relatively flat, except for the volcanic landforms of Puu O Kai, Puu O Uka, and Puu Heleakala (Figure 3-1). The Project Site is at the base of Puu Heleakala, which has a peak elevation of 1,890 feet amsl.

The Project Site elevations range from 300 feet amsl in the northeast near the base of Puu Heleakala to 40 feet amsl in the southwestern corner at Lualualei Naval Road. The PVT ISWMF elevations on the opposite side of Lualualei Naval Road currently range from 40 to 255 feet amsl. Slopes range from 14–17%.

The regional geology is shown on Figure 3-2. The caldera of the Waianae Volcano occupies most of Lualualei and the caldera boundary is just north of the PVT ISWMF (Figure 3-2, dotted fault line). Lualualei was formed by streams that eroded the volcano, filling most of the valley with alluvial and colluvial deposits. Approximately 500,000 years ago sea level was 100 feet above the current level and the reef filled the valley to a depth of approximately 300 feet (Juturna 2019).

Project Site geology is primarily older alluvium (QTao) consisting of brown to red brown deeply weathered poorly sorted and nearly impermeable friable conglomerates. The Puu Heleakala landform is a series of lava flows. The PVT ISWMF is characterized as calcareous reef rock and marine sediment (Qcrs) (Figure 3-2) (Juturna 2019).

Soil borings, test pits, and wells drilled at the Project Site indicate the soil is primarily alluvium and colluvium overlying basalt rock. The northern portion of the Project Site soils consist of basaltic cobbles and boulders intermingled with clay to 65 feet below ground surface (bgs), underlain by colluvium basaltic rock to 280 feet bgs. In the southern and western portion of the Project Site coralline materials were encountered beneath the clay layer. Coral outcrops were observed in the southern area of the Project Site. Five geologic cross-section alignments (A, B, C, D, E) through PVT ISWMF and the Project Site are shown on Figure 3-3. The cross-sections are shown on Figures 3-4, 3-5, and 3-6 (Juturna 2019).

According to the U.S. Department of Agriculture (USDA) Soil Conservation Service soil maps, the Project Site soils are primarily Lualualei extremely stony clay (Figure 3-7). The subsurface investigations at the Project Site confirmed the predominance of this type of soil; however, there were some discrepancies. The USDA soil map is annotated to reflect the field data in Figure 3-8 (Juturna 2019). The soils identified at the Project Site are:

- Lualualei extremely stony clay, with 3 to 35% slopes (LPE): Predominant soil type at the Project Site. This soil type is very sticky and very plastic clay with many stones on the surface and throughout the profile. The soil has a high shrink-swell potential. The permeability and runoff are slow. The erosion hazard is slight. It is not suitable for agriculture.
- Coral outcrop (CR): Located on the southern boundary. Coral or cemented calcareous sand. It is not suitable for Agriculture.
- Mamala stony silty clay loam, 0 to 12% slopes (MnC): two small non-contiguous areas in the southern portion of the Project Site. Dark reddish-brown silty clay loam with coral rock fragments. Also found in cracks and crevices of CR. It has limited use for agriculture if irrigated because the soil is shallow, droughty, or stony. The permeability is moderate and runoff very slow to medium. The erosion hazard is slight to moderate.
- Lualualei clay, 2 to 6% slopes (LuB): three non-contiguous locations and largest area is in the southern portion. It has limited use for agriculture if irrigated and a low growing ground cover is maintained. The runoff is slow and the erosion hazard is slight.
- Rock Land (rRK): small portion near Puu Heleakala. Exposed rock covers 25–90% of the surface and soils are very shallow. It is not suitable for agriculture (Juturna 2019, Foote et al 1972).

### **3.2.3 Impacts**

#### **3.2.3.1 Proposed Action**

Less than significant, short- and long-term, direct impacts on soil erosion or slope stability are anticipated under the Proposed Action. No indirect impacts are anticipated.

Grading is proposed during the site development phase to prepare the Project Site for the relocated operations. There will also be grading during the operational phase, as new landfill cells are developed and filled. The grading and the placement of debris in the landfill will change the topography of the Project Site but will be designed to avoid impact to slope stability. Most of the soils at the Project Site also have a slight potential for erosion.

The Proposed Action design and the *Operations Plan*, as described in Section 2.5.3.3, *Stormwater Management (Site-wide)* and Section 2.5.3.5, *Erosion Control*, would reduce the potential for soil erosion to less than significant. The SWPPP would be updated and implemented for the Proposed Action as part of the updated NPDES permit. Potential short- and long-term, direct impacts would be less than significant. No indirect impacts are anticipated. No additional mitigation measures are proposed for soil erosion.

As described in Section 2.5.3.4, *Slope Stability*, the potential for landfill slope failure would be avoided by adherence to operations protocols for the placement and compaction of waste. For example, the debris disposal area would be limited to a small designated area and compacted to stabilize the debris. Exterior landfill slopes would be no greater than 3:1. The stormwater management system and leachate control and removal system will also support geologic integrity of the Project Site. The landfill design will be subject to HDOH review and approval prior to issuing the update to the SWMP.

The Proposed Action is also designed to meet safety criteria under normal and seismic conditions. The updated SWMP requires a Seismic Stability Analysis prior to the acceptance of waste.

With these design and operational controls in place, the potential short- and long-term, direct impacts would be less than significant. No indirect impacts are anticipated. No additional mitigation measures are proposed for slope stability.

#### **3.2.3.2 No Action Alternative**

There would be no ground disturbing activities. No existing erosion or slope failure conditions were identified at the Project Site. There would be no short- or long-term, direct or indirect impacts on erosion or slope stability under the No Action Alternative.

### **3.2.4 Summary of Impacts and Potential Mitigation**

Potential impacts related to soil erosion and slope stability are reduced to less than significant through the proposed design and adherence to the Operations Plan. No additional mitigation is



warranted or proposed for the Proposed Action. No erosion or slope stability risks were identified at the Project Site and no adverse impact is anticipated under the No Action Alternative.

**Table 3-4 Topography, Soils, and Geology Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Soil erosion issues	<	0	<	0	none	0	0
Slope stability issues	<	0	<	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

### 3.3 Natural Hazards

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on or from natural hazards.

#### 3.3.1 Methodology

This section assesses the potential natural hazard risks to or from the Proposed Action. The natural hazards discussed are 1) earthquakes, 2) flooding, 3) storms, 4) tsunamis, 5) hazards related to sea-level rise, and 6) wildfires.

The natural hazard risk for the Project Site is based on published data, including online interactive maps that model the anticipated impacts of climate change. The Office of the Mayor Directive No.18-01 of July 16, 2018 directs all CCH agencies to use the following documents to establish policies to address, minimize risks from, and adapt to the impacts of climate change and sea level rise:

- *Sea Level Rise Guidance and Climate Change Brief*, prepared by CCH Climate Change Commission, adopted June 5, 2018 (CCH 2018a, CCH 2018b). The *Climate Change Brief* establishes the factual basis and broad impact of climate change, as documented by peer-reviewed scientific literature and credible empirical data sources.
- *State of Hawaii Sea Level Rise Vulnerability and Adaptation Report*, prepared by the Hawaii Climate Change Mitigation and Adaptation Commission (CCMAC 2017).

The Pacific Islands Ocean Observing System (PacIOOS) online interactive mapping tools were reviewed for the sea level rise projections (PacIOOS 2018).

### 3.3.2 Existing Conditions

#### 3.3.2.1 Earthquakes

Two types of seismic activity are common in Hawaii:

- **Volcanic:** directly related to volcanic eruptions; these earthquakes are seldom large enough to cause widespread damage, but they may produce locally extensive ground fractures and subsidence (USGS 2019).
- **Tectonic:** originate in zones of structural weakness at the base of the volcanoes and miles deeper into the oceanic crust and upper mantle; these generate the strongest and most damaging ground shaking (USGS 2019).

Thousands of earthquakes occur every year in Hawaii. Most are volcanic in origin and located on or around the Island of Hawaii, which has four active volcanoes—Kilauea, Mauna Loa, Hualalai, and Mauna Kea. Two other active volcanoes in Hawaii include Loihi, a submarine volcano south of the Island of Hawaii, and Haleakala on the Island of Maui (USGS 2019).

There are two ways to describe the size of an earthquake: 1) magnitude refers to the amount of energy released at the source of the earthquake and 2) intensity refers to observable effects of shaking on people and structures. Ground shaking is the primary cause of earthquake damage to buildings and infrastructure. Softer soils amplify ground shaking. The soils at the site are rocky.

Horizontal ground-shaking, referred to as Peak Ground Acceleration (PGA), is measured as a percent of “g”, the acceleration of gravity. For example, 100% g, PGA means the horizontal shaking speed is as fast as vertical gravity acceleration. The Modified Mercalli Intensity scale is often used to describe the observed effects of shaking relative to the PGA, as shown on Table 3-5.

**Table 3-5 Modified Mercalli Intensity and Peak Ground Acceleration Equivalents**

Modified Mercalli Intensity	Perceived shaking	Relative damage to a resistant building	Estimated PGA (percent g)
I	Not felt	None	< 0.17
II-III	Weak	None	0.17-1.4
IV	Light	None	1.4-3.9
V	Moderate	Very light	3.9-9.2
VI	Strong	Light	9.2-18
VII	Very strong	Moderate	18-34
VIII	Severe	Moderate/heavy	34-65
IX	Violent	Heavy	65-124
X-XII	Extreme	Very heavy	>124

Source: Tetra Tech 2018.

Figure 3-9 shows the 100-year probabilistic seismic hazard in Hawaii. The highest intensity earthquake hazard level anticipated in Hawaii is VII, very strong, on the Island of Hawaii. The hazard intensity diminishes with increased distance from the island to a moderate hazard on Oahu and weak hazard in Niihau.

### **3.3.2.2 Flooding**

Oahu is subject to flooding from stream overflow, storm events, and tsunamis. Excessive surface water from overland stormwater flow frequently causes flooding in poorly drained areas. Some of the flooding is attributed to inadequate drainage facilities, obstructed water ways, poor soil conditions, and excessive land slopes (FEMA 2014). As described in Section 3.1, *Climate and Rainfall*, the Project Site and vicinity have low annual rainfall.

The PVT ISWMF and the Project Site are both within the Ulehawa Watershed. Ulehawa Stream is perennial, drains the watershed and is aligned along the western boundary of the PVT ISWMF. It is about 5 miles in length and the segment south of PVT ISWMF is a concrete drainage channel designed to handle a 100-year storm. Figure 3-10 identifies the floodways on either side of the Stream (Figure 3-10).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps identify the Project Site as Zone D, unstudied areas where flood hazards are undetermined (Figure 3-10). The areas north, east and south of the Project Site are also designated Zone D, undetermined. The PVT ISWMF located west of Lualualei Naval Road is in Zone X, which is outside of the 0.2% annual chance of flood.

The surface water hydrology at the Project Site and within the vicinity is described in Section 3.4, *Water Resources*. Typical rainfall tends to permeate the soils or evaporate at the Project Site. During severe storm events, rainfall follows the topographic gradient of the Project Site and flows into existing drainage swales and culverts south and west of the Project Site. The run-off ultimately discharges into Ulehawa Stream. The areas between the Project Site and Farrington Highway have not been flood prone. However, there is a history of drainage issues and flood damage in the communities west of the Ulehawa Stream.

The coastal high hazard areas of Zone V have a 1% annual chance of experiencing wave heights of 3 feet or greater. FEMA also designates a Limit of Moderate Wave Action identifying additional areas with wave heights less than 3 feet, but also damaging. These areas are not defined for Hawaii yet (Figure 3-10). The PVT ISWMF and Project Site are outside of the FEMA coastal hazard area.

### **3.3.2.3 Storms**

Damaging winds, heavy rainfall in excess of 6 inches, and storm surges are most commonly associated with passing tropical cyclones (hurricanes, tropical storms, and tropical depressions). Tropical cyclones are classified as follows:

- **Hurricane:** An intense tropical weather system with a well-defined circulation and maximum sustained winds of 74 mph or higher. In the western Pacific, hurricanes are called "typhoons." Similar storms in the Indian Ocean are called "cyclones."
- **Tropical Storm:** An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39-73 mph.
- **Tropical Depression:** An organized system of clouds and thunderstorms with defined circulation and maximum sustained winds of 38 mph or less (Tetra Tech 2018).

The first officially recognized hurricane in the State of Hawaii was Hurricane Hiki in August 1950. Two other notable hurricanes in Hawaii were:

- Hurricane Iwa, which occurred in 1982, caused extensive damage, including inundation of the central sections of the coast southwest of the Waianae Range as well as oceanfront areas on the south coast of Oahu from Sand Island to Diamond Head. 421 acres of land were flooded on Oahu by the combined effects of storm surge and high wave action. The height of the actual storm surge with Hurricane Iwa probably reached to about 5 feet along the Waianae coast. PVT ISWMF was not in operation during the 1982 hurricane.
- Hurricane Iniki, which occurred in 1992, is considered the strongest hurricane to hit the Hawaiian Islands this century. Based on estimated peak sustained winds of between 130 and 160 mph, Iniki would be classified as a Category Four storm. Despite the strength of the storm, Iniki did not cause as much damage on Oahu as Iwa did. Post-storm estimates of wave heights range from a maximum of 16 feet on the Waianae coast to 4–9 feet along the south coast of Oahu from Sand Island to Diamond Head. PVT ISWMF was not damaged during the 1992 hurricane.

The history of extreme storm events affecting Oahu between 2012 and 2016 includes the following storms and the tracks of major storms are shown on Figure 3-11:

- August 4 to 21, 2014 - Tropical Storm Iselle;
- August 20 to 24, 2015 - Hurricane Kilo;
- August 26 to September 4, 2015 - Hurricane Ignacio;
- September 2 to 9, 2015 - Hurricane Jimena;
- September 22, 2015 - Tropical Storm Niala;
- October 2 to 5, 2015 - Tropical Storm Oho; and
- October 20 to 23, 2015 - Hurricane Olaf.

Hurricane Lane occurred August 18 to 28, 2018 and generated winds of 40–80 mph at the PVT ISWMF on August 27, 2018. Although the landfill was closed, 80 mph gusts were verified at the two onsite wind gauges. PVT, as part of the emergency disaster response team, met with the CCH before the storm to plan for post-storm emergency procedures. The PVT ISWMF opened the day after the hurricane and was prepared to receive disaster debris.

Based on historic data, Hawaii has a 25% chance of a tropical cyclone occurring in any given year and there is a 3% chance that the storm damage would result in a FEMA declaration (Tetra Tech 2018).

High wind events that are not associated with a tropical cyclone occur and have caused damage to personal property, public facilities, utility infrastructure, and trees. Damage does not typically occur until wind speeds are 40 mph or greater. These trade wind or Kona wind events occur more frequently than a tropical cyclone (Tetra Tech 2018).

High wind events affecting Oahu between 2012 and 2018 were as follows:

- February 7, 2012;
- February 13, 2015;
- February 16, 2016;
- March 8, 2016;
- July 20-26, 2017; and
- October 23 to 14, 2017.

All types of tropical cyclones cause large ocean swells, generally in areas that are not directly impacted by the storm. Storm surge is a rise of ocean water levels above the predicted astronomical tide caused by storm winds. The surging ocean causes extreme coastal flooding when it coincides with high tides.

#### **3.3.2.4 Tsunami**

Tsunamis are a series of waves created by an underwater disturbance such as an earthquake, landslide, volcanic eruption, glacial calvings, or meteorite. A tsunami can move at hundreds of miles per hour in the open ocean but have a small wave height offshore (a foot above normal sea surface), and a very long wave length (often hundreds of miles long), which is why they generally pass unnoticed at sea. Once the wave approaches the shoreline, it builds in height and can be greater than 100 feet above sea level when it lands onshore. The maximum wave heights tend to occur at steep shorelines and the greatest horizontal inundation occurs at low-lying coastal plains. Areas at greatest risk are those less than 25 feet above sea level and within a mile of the

shoreline. The most common cause of death associated with tsunamis is drowning (Tetra Tech 2018).

Local tsunamis are likely to be generated near the Island of Hawaii and could reach all major Hawaiian Islands within one hour. However, tsunamis reaching Hawaii can be generated from locations more than 600 miles away. Epicenters in Alaska, Washington, Oregon, California, Chile, China, and Japan have affected the Hawaiian Islands (Tetra Tech 2018).

About half a dozen tsunamis have crossed the Pacific Ocean in the last decade; those which required mandatory shoreline evacuations in Hawaii occurred in February 2010, March 2011, and October 2012. Tsunami evacuation maps have been augmented to include an “extreme” tsunami hazard evacuation zone. The Project Site is far inland of the tsunami evacuation zone, but the southern boundary is within the extreme tsunami hazard zone (Figure 3-12).

Between 2012 and 2017, there have been no recorded tsunamis that originated in Hawaii. Hawaii has experienced eight recent tsunami events in the form of runups. The following events affected the Waianae coast between 2012 and 2017 (Tetra Tech 2018):

- October 28, 2012 - from British Columbia;
- February 6, 2013 - from Santa Cruz Islands;
- April 1, 2014 - from northern Chile; and
- September 16, 2015 - from central Chile.

#### **3.3.2.5 Sea Level Rise**

Global sea level rise is attributed to changes in ocean volume due to ice melt and thermal expansion. The melting of glaciers and continental ice masses can contribute significant amounts of freshwater input to the earth’s oceans. In addition, a steady increase in global atmospheric temperature creates an expansion of salt water molecules, increasing ocean volume (Tetra Tech 2018).

Local “relative” sea level rise refers to the height of the water as measured along the coast relative to a specific point on land. Rising sea level and projections of stronger and more frequent El Nino events and tropical cyclones in waters surrounding the State of Hawaii all indicate a growing vulnerability to coastal flooding and erosion. The local observations vary, for example, the rapid acceleration observed in globally averaged rates of sea-level rise has not yet been observed in local sea-level data for the County of Hawaii on the Big Island, whereas Oahu’s daily temperature range is changing much more rapidly than the global mean.

The modeled sea level rise exposure area in the vicinity of the Project Site is shown on Figure 3-12. The sea level rise exposure map was obtained from the PacIOOS Hawaii Sea Level Rise Viewer (<http://www.pacioos.hawaii.edu/shoreline/slr-hawaii>), which depicts areas exposed to potential

chronic flooding and land loss related to annual high wave flooding, passive flooding, and coastal erosion, assuming a specific sea level rise. Figure 3-12 shows the areas directly affected by future scenario of 3.2 feet of sea level rise, which is the highest sea level scenario modeled. The model includes the 1% annual chance flood (Special Flood Hazard Area) (V zones only) as depicted in the Flood Hazard Assessment Report (Figure 3-10). The model does not include the additional flood risk due to hazard events such as tropical cyclones, storm surge, and tsunamis.

With 3.2 feet of sea level rise, the coastal areas, including Farrington Highway would be inundated by the mid- to latter-part of this century. The Project Site is outside of the sea level rise exposure, passive flooding, and high wave flooding areas.

### 3.3.2.6 Wildfires

The *Western Oahu Community Wildfire Protection Plan* was prepared in 2016 by the Hawaii Wildfire Management Organization (HWMO 2016). The study area extends between Kaena Point and Ewa, with the Pacific Ocean to the west and the Waianae Mountain Range generally on the east boundary of the study area. This area has historically (2000-2011) had the highest number of ignitions per square mile over a larger geographic area than the rest of Oahu (Figure 3-13). The contributing factors to the wildfire hazard risk within the study area include:

- Climate: Low humidity, high temperature, high winds, and drought increase the potential for wildfires on the leeward coast. Climate change is likely to increase the length of drought periods.
- Topography: Wildfires spread more quickly as they progress upslope.
- Vegetation: Establishment of nonnative grasslands and shrublands, especially in lower elevation areas, is a leading cause of increased fire risk in western Oahu. This is a concern in humid areas. Guinea grass (*Megathyrsus maximus*), buffel grass (*Cenchrus ciliaris*) and ekoa (*Leucaena leucocephala*) create continuous, highly flammable fuel beds over much of the landscape. In addition, the embers from ekoa are primarily responsible for spot fires and damage to homes.
- Proximity of development to ignition and fuel sources: The “Wildfire Urban Interface” is a term used to describe the area where the natural environment and development meet. The risk to property and life is greater when the wildfire ignition point is near populated areas. Most wildfires on Oahu are caused by human error or arson, and access to undeveloped lands is easier near developments, powerline rights-of-way, and along roads.
- Firefighting capacity, access, and water availability.
- Building structural vulnerability to fire damage.

Thirty-six wildfire hazard characteristics, including the above, were collectively used to assess communities at risk for wildfires within the study area. The Project Site and surrounding communities were rated as having a high risk.

Fire response is addressed in Section 4.5, *Emergency Services*.

### **3.3.3 Impacts**

#### **3.3.3.1 Proposed Action**

PVT ISWMF plays a critical role in Oahu's recovery from natural disasters as a government designated location for disaster debris management and disposal. PVT's emergency disaster debris management responsibility would continue under the Proposed Action. The Project Site would provide landfill capacity and acreage for storing, sorting, and managing the debris, providing a long-term, direct beneficial impact to the CCH post-emergency recovery.

The Proposed Action would not increase the risk of damage from or frequency of natural hazards.

The Proposed Action is designed to comply with PVT's SWMP and local building codes, which address seismic risk. No high occupancy, multi-story, or permanent facilities are proposed under the Proposed Action. The seismic analysis for the PVT ISWMF landfill was based on an earthquake with 2% probability of 0.25 g intensity occurring in 50 years. The conclusion was the containment system for the landfill is stable and is designed to resist the maximum horizontal acceleration from the design earthquake. The *Operations Plan* will include an updated Seismic Stability Analysis.

Storm and high wind events could have a potentially adverse impact on the Proposed Action facilities and operations. These impacts would be short-term and reduced to less than significant by the proposed engineering design components (e.g., stormwater management, dust-control fencing, landscaping), the Project Site's inland and relatively remote location, and operational plans and procedures that address emergency preparedness. The PVT ISWMF closed in August 2018 during Hurricane Lane with wind gusts of 80 mph and sustained minor damage. The PVT operations would be closed during future storm and high wind events (+40 mph), in the interest of employee health and safety.

Hawaii rainfall has declined over the past 30 years in both wet and dry seasons (CCH 2018b). Based on the data collected at the PVT ISWMF (Table 3-1) beginning in 2006, no obvious trends in average annual rainfall or maximum rainfall within a 24-hour period are apparent. The leeward areas, including the Project Site, will likely have fewer clouds (increased solar radiation) and less rainfall. The variability in El Nino-related precipitation is likely to increase with global warming, making rainfall predictions difficult (CCH 2018b).

The PVT ISWMF stormwater management system, designed for the 24-hour 25-year rain event, has successfully controlled heavy rainfall and the same design standards are proposed at the Project Site. From a qualitative perspective, if the predictions of less rainfall and higher radiation at the Project Site due to global warming are accurate, then the proposed stormwater system design



for 25-year rain event would continue to be sufficient. If the heavy rainfall events become more frequent, then the stormwater management capacity would be sufficient because of the anticipated increase in solar radiation and rates of evapotranspiration. No adverse short- and long-term and direct and indirect adverse stormwater management impacts are anticipated to the Project Site or from the Project Site to adjacent parcels.

The Project Site is designated as an area where the flood hazard has not been determined (Zone D on Figure 3-10); however, it is likely to be outside of the 0.2% annual chance floodplain (Zone X), based on elevation and distance from surface water.

The Project Site is sufficiently inland to avoid short- and long-term, direct impacts from coastal hazards (e.g. coastal flooding, storm surge, tsunamis, or sea level rise). The Project Site is outside of the sea level rise exposure, passive flooding, and high wave flooding areas.

There would be a less than significant, short-term, indirect impact in accessing the Project Site if/when Farrington Highway is flooded by a coastal hazard event. There is also a potential long-term, indirect impact to site access if/when future sea level rise inundates Farrington Highway.

An extreme tsunami could affect the southern boundary of the Project Site based on preconstruction site conditions (Figure 3-12). Construction would elevate the landscaped buffer area and the site entrance. Similarly no debris management areas would be affected because they are at a higher elevation north of the extreme tsunami zone (while the PVT ISWMF is shown in the extreme tsunami zone, the landfill is now higher than the extreme tsunami inundated zone). There would also be less than significant, short-term, indirect adverse impact on access to the Project Site in the event that a tsunami impacts Farrington Highway and/or Lualualei Naval Road.

The Project Site is vacant and vulnerable to wildfires. As discussed in Section 3.7, *Biological Resources*, the prevalent non-native vegetation at the Project Site provides fuel for wildfire, including the recent wildfire in 2019. The development of the Project Site would reduce the vegetation hazard that contributes to wildfire risk. The *SWMP Operations Plan* outlines fire prevention and response protocols, which will be updated to include the Project Site. The proposed setbacks, irrigated landscaping, roadways (i.e., firebreaks), and restricted access to the Project Site would further reduce the wildfire risk from the Project Site and to adjacent properties. The reduced wildfire risk associated with the Proposed Action would be a short-term, indirect beneficial impact through the removal of vegetation; a long-term, direct beneficial impact due to PVT's fire prevention and response protocols; and long-term, indirect beneficial impact to nearby residences.

No mitigation by PVT is warranted or proposed.

### **3.3.3.2 No Action Alternative**

The geographic natural hazard risk areas identified under the Proposed Action are the same as the No Action Alternative. The No Action Alternative would not alter the natural hazard risks identified in Section 3.3.2, *Existing Conditions*. Because the Project Site would remain undeveloped there would be no impact from the natural hazards on the land use. There would be no short- or long-term, direct or indirect impact from earthquake, flooding, storm, tsunami, or sea level rise hazards.

The wildfire risk at the Project Site and in the vicinity would continue to be high. Fire prevention and response capabilities would continue to be required at PVT ISWMF through closure and post-closure activities. Post-closure, PVT would have limited staff but would assist HFD with wildfire response at the Project Site.

The vacant Project Site is currently available for temporary staging of emergency debris. Under the No Action Alternative, the PVT ISWMF would close when it reaches capacity and would not be able to accept emergency disaster debris. The CCH would need to reassess the emergency debris management alternatives. This would have a less than significant, long-term, indirect adverse impact on the CCH's plan for post-emergency recovery. The CCH would need to use an alternative location.

### **3.3.4 Summary of Impacts and Potential Mitigation**

Less than significant direct and indirect short-term adverse impacts to the Proposed Action could result from wind damage, extreme tsunami damage at the southern border of the Project Site, and access to the Project Site if Farrington Highway is flooded during a natural hazard. The Proposed Action would have a beneficial long-term direct and indirect impact on reducing wildfire risk and damage. PVT would continue to provide post-natural disaster debris management services for an additional beneficial impact.

Under the No Action Alternative, a less than significant adverse impact would result because PVT would no longer be able to provide post-disaster debris management services and the regulatory agencies would have to identify alternative solutions (see Table 3-6).

**Table 3-6 Natural Hazards Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Earthquake Hazards	0	0	0	0	none	0	0
Flooding Hazard	0	0	0	0	none	0	0
Storm Hazards (wind)	<	<	0	0	none	0	0
Storm Hazards (stormwater management)	0	0	0	0	none	0	0
Tsunami Hazard	0	<	0	0	none	0	0
Sea Level Rise Hazards	0	0	0	0	none	0	0
Wildfire Hazard	0	+	+	+	none	0	0
Post-Disaster Recovery	0	0	+	0	none	<	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 3.4 Water Resources

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on water resources.

### 3.4.1 Methodology

Juturna, LLC. (Juturna) prepared the *Geology, Hydrology and Water Quality Report for the PVT ISWMF Relocation* in March 2019, included as Appendix A. This report was the basis for the Existing Conditions for hydrology, surface water, and groundwater quality. Juturna's scope of work included:

- Review existing hydrologic data from the literature;
- Review site-specific water resource data, including twelve years of water monitoring data;
- Assess the Proposed Action's potential impacts on water resources; and
- Prepare the report.

All EIS figures in this section were excerpted from the *Geology, Hydrogeology, and Water Quality Report* (Juturna 2019).

### **3.4.2 Existing Conditions**

#### **3.4.2.1 Surface Water**

Lualualei Valley is comprised of two watersheds: Ulehawa to the east and Mailiili to the west.

- The Ulehawa watershed, where PVT ISWMF and the Project Site are located, is 5 square miles in area and has a maximum elevation of 2,844 feet. The perennial Ulehawa Stream is adjacent and west of the PVT ISWMF. It conveys water from the watershed a distance of 5.1 miles to the Pacific Ocean. The mouth of the stream is approximately 1,600 feet southwest of the PVT ISWMF (Juturna 2019).
- The Mailiili watershed, which encompasses 19.2 square miles and has a maximum elevation of 3,127 feet, is much larger than the Ulehawa watershed. Mailiili Stream, which drains the Mailiili watershed, is a perennial stream with a total length of 20.9 miles (Juturna 2019).

The average annual rainfall at PVT ISWMF is 12 inches, as described in Section 3.1, *Climate and Rainfall*.

Stormwater runoff from the northern portion of the Project Site and upslope locations flows over land toward Lualualei Naval Road where it is directed to a drainage culvert beneath Lualualei Naval Road to a concrete lined drainage channel between PVT ISWMF and Pine Ridge. The drainage channel discharges to Ulehawa Stream and ultimately to the Pacific Ocean.

Rainfall runoff from the southern portion of the Project Site also flows downslope over land to the drainage channel along Lualualei Naval Road and is conveyed to a concrete-lined drainage channel that is aligned parallel to Farrington Highway (inland of the shopping center). The drainage ditch discharges to Ulehawa Stream.

HAR Ch. 11-54 classifies Ulehawa Stream as a Class 2 Inland Water. Class 2 Inland Waters are protected for recreational purposes, support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. HAR Ch. 11-54 states that all uses of Class 2 Inland Waters need to be compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters.

Drainage is managed at the PVT ISMWF to:

- prevent run-on of surface water to the active disposal face or uncovered refuse;
- prevent run-off of water that has contacted the exposed active disposal face;
- minimize erosion in all areas of the site;
- maintain roads and other ancillary facilities in useable condition under all weather conditions; and

- prevent excessive runoff or sedimentation impacts to neighboring properties or receiving bodies of water (Juturna 2019).

Stormwater runoff at the existing PVT ISWMF is collected onsite in a system of surface ditches, channels, pipes, and basins. The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm. The system has successfully minimized sediment and reduced the volume of water that is discharged from the site. Figure 2-3 shows the seven stormwater basins and six discharge points which discharge stormwater into Ulehawa Stream. All six discharge points are permitted under PVT ISWMF's NPDES permit for discharge of stormwater. One of the stormwater basins (Basin A) does not have a discharge point because the limited amount of stormwater that collects in this basin percolates into the ground resulting in no discharge off site or flows into Basin A-1, which does have a discharge point. The basins with discharge points are equipped with floating skimmers that slowly drain water from the surface of the basins during storm events. This maximizes sediment settlement before water is discharged to Ulehawa Stream. Typically, run-off entering the sediment basins evaporates before it can be discharged into Ulehawa Stream.

Stormwater in the C&D disposal area at the PVT ISWMF is managed by controlled grading on the surface of the landfill and by maintaining an engineered system of drainage ditches, channels, pipes, and basins. The landfill top deck and other areas in the vicinity of active disposal areas are graded at a slope of 2% to 5% away from the active area. Earth berms are constructed upgradient of the active area if needed to prevent run-on from contacting the waste, and to divert drainage around any exposed waste (Juturna 2019). Similarly, berms are constructed downgradient of exposed waste to prevent the runoff of any precipitation that has contacted waste. Such water is retained within the waste, for collection and management as leachate. No runoff of precipitation that has contacted waste is discharged into Ulehawa Stream (Juturna 2019).

The stormwater control system is inspected and maintained as needed after significant storm events. Inspections focus on locating and repairing any areas of excessive erosion, ensuring that skimmers installed in sedimentation basins are working properly, and no pipe inlets are plugged or blocked with sediment or debris. Sediment is removed from ditches and basins at least once each year (Juturna 2019).

The Notice of General Permit Coverage (NGPC) for PVT ISWMF's NPDES Permit specifies the facility's stormwater monitoring and testing requirements and stormwater discharge limitations (Juturna 2019). Discharge Monitoring Reports are submitted annually to the HDOH. The permit requires stormwater discharge from all six discharge points be tested annually for 16 parameters and stormwater from discharge point D-3, which is downgradient of the equipment maintenance area, be tested for five additional parameters. The results for years 2007 to 2018 are included in Appendix A (Juturna 2019).

The monitoring data indicates that stormwater discharged from the PVT ISWMF met the permitted limits for all tested parameters. The few exceedances of permitted limits were addressed by operational changes as follows (Juturna 2019):

- The concentration of total recoverable iron from discharge Point 5 during four sampling events exceeded the effluent limitation of 1,000 micrograms per liter. The iron in the stormwater runoff is a result of naturally occurring, iron-rich surface soils (reddish brown clay and silt) running off the unpaved roadways at the PVT ISWMF site during heavy rain. To reduce iron concentrations, PVT paved the roadway in the vicinity of sedimentation Basin E, and the entire parking area and roadways that drain into Basin B. No subsequent exceedances were reported.
- pH was exceeded by 0.01 once at one discharge point over the eleven years of data and is attributed to field equipment error.

### 3.4.2.2 Groundwater

Groundwater at the Project Site occurs within coralline, alluvial, and volcanic materials. According to the aquifer identification and classification for Oahu, three aquifers occur beneath the Project Site (Juturna 2019). All three aquifers are classified within the Lualualei Aquifer System of the Waianae Aquifer Sector, as shown on Figure 3-14. Aquifer 30302116 is above (Upper) Aquifer 30302122 (Lower). Table 3-7 lists the characteristics of the aquifers (also shown on the Figure 3-14) and the groundwater levels (in feet) bgs, as measured at PVT monitoring wells. None of the aquifers are suitable for drinking water or are ecologically important and all are characterized as having moderate salinity (Juturna 2019).

**Table 3-7 Aquifers Beneath the Project Site**

Aquifer Code 30302-	Description	Source of Drinking Water	Replaceable	Vulnerability to Contamination	Water Depth (feet bgs)
116	Upper, basal unconfined, sedimentary	No	No	High	30-60
122	Lower, basal, confined, dike	No	Yes	Low	-
112	Basal, unconfined dike aquifer	No	Yes	High	132

Source: Juturna 2019.

Aquifer 30302116 groundwater flow direction and gradient (Figure 3-15) is monitored semiannually, as part of PVT's groundwater monitoring program. Groundwater flows beneath the site in a south to southwest direction with a very flat gradient (Figure 3-15). Velocity has consistently been 1.6 to 2.4 feet per day and the groundwater elevation change has been less than 2 feet since 1995. The nearest drinking water well is over a mile northwest and upgradient of the Project Site (Juturna 2019).

Figure 3-16 identifies the nineteen production wells within 0.5 miles of the Project Site that are registered with the DLNR, eight of which are unused or closed. The water from the active wells is brackish, non-potable, and used for irrigation or industry. Four of the wells are managed by PVT and three are located on the Project Site: 02, 03, and 11. The water from the two active PVT production wells (PW-1 and PW-2) is non-potable and used for dust suppression and irrigation at the PVT ISWMF. No drinking water wells are located within 1 mile of the Project Site and the nearest is upgradient and to the north (Juturna 2019).

Injection wells can be used for discharging waste (e.g., sanitary sewer waste into cesspools) and these types of wells are only permitted in areas where the discharge is unlikely to impact water supply. The UIC boundary is shown on Figure 3-16 and injection wells are permitted seaward of that line. The southeastern corner of the Project Site is seaward of the UIC. Nine injection well permits were issued by HDOH within 0.5 miles of the Project Site (Figure 3-16); however, they are closed, in the process of being closed, or the permit to install the wells has expired. All are downgradient of the Project Site. There are no injection wells managed by PVT (Juturna 2019).

PVT has conducted groundwater quality monitoring from their monitoring wells (Figure 3-16) since 1992 to demonstrate the PVT ISWMF landfill operations and controls are effective in protecting groundwater quality. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's SWMP. Monitoring wells do not need to be registered with the State. There is always at least one monitoring well located upgradient from and unaffected by the landfill operations to compare to downgradient water quality. There is currently one upgradient (MW-1C) and three downgradient (MW-1B, MW-2, and MW-3) groundwater monitoring wells at the PVT ISWMF (Figure 3-16). The monitoring program has evolved over time and monitoring wells (MW-1, MW-1A and MW-4) have been replaced, as the landfill operations progressed. Groundwater production wells are also monitored for select analytes (Juturna 2019).

The following groundwater parameters are monitored semiannually (Juturna 2019):

- Volatile Organic Compounds
- Total Dissolved Solids
- Chloride, Sulfate
- Alkalinity as Calcium Carbonate, Bicarbonate
- Calcium, Magnesium, Potassium, Sodium
- Field Measured Temperature, Conductivity, pH and Water Level

The following parameters are monitored once every 5 years:

- Arsenic, Cadmium, Chromium, Iron, Lead
- Extractable Petroleum Hydrocarbons – Diesel Range Organics
- Total Organic Carbon

The monitoring results are provided to HDOH semiannually and are available for review at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. Appendix A summarizes the historical data.

Volatile organic compounds (VOCs) have been detected at upgradient wells at levels below the HDOH Environmental Action Levels (EAL). Trichloroethene, tetrachloroethene, 1,2-dichloroethane were detected at the former and current upgradient monitoring wells. These chemicals are associated with solvents used to clean metal parts and dry cleaning. The source is believed to be an unlined wastewater pool at the Lualualei Naval Reservation. Trace levels of trichloroethene were also detected at downgradient MW-3 during three sampling events in 1999, and one sampling event in 2002, 2010, and 2011 (Juturna 2019).

Methyl tert-butyl ether, a fuel additive, was detected in trace amounts at upgradient well MW-1A from 1995 to 2000. It is attributed to abandoned buses and drums that were dumped by others in Ulehawa Steam and removed in 2001 (Juturna 2019).

Total dissolved solids, chloride, sodium, potassium, magnesium, calcium, sulfate, and bicarbonate. are naturally occurring in groundwater and are used to assess small changes or trends in groundwater geochemistry (Juturna 2019). Monthly, the production wells, PW-1 and PW-2, are tested for chloride concentrations. PW-1 has averaged 1,081 milligrams per liter (mg/L) and PW-2 averages 3,000 mg/L. PW-1 generally has lower concentrations of all inorganic analytes than the monitoring wells and PW-2. The exception is MW-2 which has historically been less brackish than other wells. This is attributed to its proximity to the PVT nursery which is irrigated with potable water and leaks in subsurface potable water lines (Juturna 2019).

The levels of metals detected are typical of naturally occurring levels in groundwater.

The laboratory data is further analyzed using a Shewart-cumulative sum statistical analysis program. It compares data from the monitoring wells over time, for each analyte and establishes a statistical “control limit”. Exceedances of the control limit indicate the possibility of a release from the PVT ISWMF. In the last 26 years of groundwater monitoring, there were few exceedances, and these were not attributed to a release from the PVT ISWMF (Juturna 2019).



### **3.4.2.3 Leachate**

In accordance with the leachate monitoring program, leachate generated from landfill disposal cells was collected annually over the past twelve years and tested for the same analytes as the monitoring wells. The landfill liner system is intended to prevent leachate from being released to the ground and affecting the groundwater quality. Most analytes are not detected, but there have been detections of chromium, lead, and total petroleum hydrocarbons that are related to pump wear rather than the types of materials being landfilled. The concentrations have been below the HDOH EAL.

When compared with the chemical profiles of the groundwater wells, Ulehawa Steam, and Stormwater Basin C, leachate profiles are different. This means the leachate is not influencing groundwater (Juturna 2019).

### **3.4.3 Impacts**

#### **3.4.3.1 Proposed Action**

##### **Surface Water**

The Proposed Action would be subject to the same BMPs, operational controls, and regulatory requirements as the existing PVT ISWMF to prevent surface water quality degradation. There would be no change in the types of materials accepted at the Project Site, except there would be no ACM accepted. The Proposed Action does not involve work in, over, or under waters of the U.S. and would comply with the State's Water Quality Standards and other applicable provisions of HAR Ch. 11-54 and 11-55.

During initial site development, BMPs for erosion control and stormwater management protocols would retain stormwater onsite. The stormwater management system would be installed early in site development phase. The system is described in Section 2.5.3.3, *Stormwater Management (Site-wide)* and the location of associated infrastructure is shown on Figures 2-3 and 2-9. The stormwater management system would be designed to manage runoff from a 25-year, 24-hour storm. The system would collect stormwater runoff from the Project Site and the adjacent slopes of Puu Heleakala and divert it away from on-site operations and the neighboring properties. Stormwater runoff would flow over land into earthen drainage channels located around the perimeter of the Project Site. The channels would convey the stormwater into stormwater basins located in the southern portion of the Project Site (Figures 2-3, 2-9). In addition to stormwater basins, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion.

The Proposed Action's stormwater management system is designed to meet the same NPDES permit conditions as the PVT ISWMF. The existing NPDES permit and monitoring program would be modified to include the Project Site. No new discharge points are proposed.

Within the basin, stormwater would either naturally percolate into the ground or evaporate. The proposed stormwater basins are located seaward of the Underground Injection Control (UIC) line (Figure 3-16).

In the event of an extreme weather event in which runoff exceeds the stormwater basin capacity, the stormwater flow would discharge into the existing PVT ISWMF stormwater Basin A-1 for additional retention. If the Basin A-1 capacity is exceeded, stormwater would be discharged at the existing permitted Discharge Point D-1 to Ulehawa Stream (Figure 2-3). Prior to discharge, a skimmer in Basin A-1 would reduce the sediment loading of the stormwater.

Operational BMPs would be implemented to reduce stormwater runoff and associated impacts. The stormwater system would be inspected regularly and after storm events. Maintenance activities include periodic sediment removal. Internal roads, the MRD area, and maintenance and storage areas would be paved to minimize erosion. The MRD-2 and MRD-3 and maintenance facility, including petroleum, oil, and lubricant storage areas, would be covered so as not to come in contact with rain. Feedstock will be stored in enclosed storage bins, temporarily stored within the landfill, or temporarily stockpiled. Temporary stockpiles will be covered, as necessary, during storm events. The proposed renewable energy facilities (i.e., gasification or anaerobic digestion) and electrical systems would be enclosed.

The Proposed Action is not anticipated to contribute to plastic debris or microplastic (plastic debris less than five millimeters in length) pollution of nearby surface and marine waters. C&D debris does not contain large amounts of plastic and most plastic materials are segregated from the waste stream and used as feedstock for renewable energy providers. PVT implements a litter control program to minimize wind-blown litter. Microplastics come from a variety of sources, including from larger plastic debris that degrades into smaller and smaller pieces. The landfill liner prevents degrading plastic debris from entering ground or surface water. The stormwater basin would be covered with synthetic turf, a potential source of microplastics. A 2018 European Commission study found that artificial turf with infill material (used to cushion sports fields) has been linked to microplastic pollution (Hann et al. 2018). Artificial turf for non-sport applications does not contain plastic infill material as it is both costly and as locally derived sand serves the same purpose. The pile fibers may wear or break and form microplastics, but this is expected to be minimal compared with sports turf that is subject to a great deal more abrasion. The stormwater infiltration gallery and underlying soils (coral/coralline gravel w/sand and silts) also serves to filter out any microplastics.

Potential short-and long-term, direct and indirect impacts would be avoided through engineering design and adherence to the Operations Plan. The anticipated effectiveness of these controls in avoiding impacts is based on twelve years of water monitoring data. No short- or long-term, direct or indirect adverse impacts to Ulehawa Stream or the Pacific Ocean are anticipated under the Proposed Action.

## **Groundwater**

The Proposed Action would be designed, constructed, and managed to meet the same standards and permit conditions as the PVT ISWMF to protect groundwater quality. The effectiveness of these controls in avoiding impacts is based on twelve years of water monitoring data that demonstrate the PVT ISWMF operations have not negatively impacted groundwater or surface water quality.

The groundwater monitoring program would be expanded, including five new monitoring wells: MW-3A, MW-4A, MW-5, MW-6, and MW-7, located as shown on Figure 2-9. The wells will be installed, and baseline water quality monitoring would be conducted prior to receiving C&D debris onsite.

No short-or long-term direct or indirect adverse impacts to groundwater are anticipated under the Proposed Action. No additional mitigation is required.

### **3.4.3.2 No Action Alternative**

There would be no development at the Project Site. No stormwater management infrastructure would be installed at the Project Site and the stormwater runoff would continue to flow overland to ditches and culverts that discharge to Ulehawa Stream, as described under Section 3.4.2, *Existing Conditions*.

The groundwater conditions would be the same as existing conditions. Non-potable water would continue to be withdrawn from the wells on the Project Site for use at PVT ISWMF and PVT would continue to adhere to a groundwater and leachate monitoring program that will continue beyond closure activities. No short-or long-term, direct or indirect adverse impacts to Ulehawa Stream, the Pacific Ocean or groundwater are anticipated under the No Action Alternative.

### **3.4.4 Summary of Impacts and Potential Mitigation**

PVT will implement BMPs, operational controls, and regulatory requirements of the existing facility at the Project Site. The Proposed Action would have no short- or long-term, direct or indirect impact on surface or ground water quality. No additional mitigation measures are recommended or necessary. The No Action Alternative would have no short- or long-term, direct or indirect impact on surface or ground water quality.

**Table 3-8 Water Resources Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Surface Water Resources	0	0	0	0	none	0	0
Groundwater Resources	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 3.5 Air Quality

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on air quality.

### 3.5.1 Methodology

Air quality is the degree to which the ambient air is pollution-free and is assessed by measuring a number of indicators of pollution. Air quality is regulated under the Clean Air Act.

J.W. Morrow prepared an *Air Quality Impact Report* (AQIR) (Morrow 2019) for the Proposed Action, included in Appendix B. The purpose of the report is to assess the potential air quality impact of fugitive dust associated with the proposed landfill operations. The AERMOD computer model was used to assess the ambient air quality of operations at changing elevations throughout the life of the landfill.

This AQIR is the latest in a series of air quality and human health risk assessment studies prepared for the PVT ISWMF. Collectively, the reports describe ambient air quality at the PVT ISWMF and assess potential health impacts of fugitive dust on PVT employees and residents downwind of PVT operations. The reports were either prepared by or submitted to HDOH. The previous studies are available for download from the PVT EIS webpage: <http://www.pvtland.com/eis>.

The previous air quality impact and monitoring reports are as follows:

- Air Monitoring, PVT Land Company, Summary Report, November 2009-November 2010 (Morrow 2010).
- Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, October-November 2010 and May-June 2011 (Morrow 2011a, 2011b).
- Nanakuli Dust Study Technical Evaluation and Recommendations, December 2011 (Tetra Tech 2011) (also included as Appendix C of this Final EIS).

- Air Quality Impact Report, Proposed Operations Expansion PVT Integrated Solid Waste Management Facility (Morrow 2015).

The previous health and human risk assessments are as follows:

- Human Health Risk Assessment of Fugitive Dust and Surface Soils, PVT Landfill, June 2005 (AMEC 2005).
- PVT Landfill Human Health Risk Assessment of AES Conditioned Ash Limited Demonstration Project, February 2010 (AMEC 2010).
- PVT Landfill Limited Human Health Risk Assessment Construction Debris Recycling, July 2010 (Environmental Risk Analysis LLC 2010).
- PVT Landfill, Human Health Risk Assessment, Construction Debris Recycling and Material Recycling Facility, April 2015 (Environmental Risk Analysis LLC 2015).
- PVT Landfill Human Health Risk Assessment Use of Gasification Wood and Plastic Ash, June 2017 (Environmental Risk Analysis LLC 2017).

The AQIR for the Proposed Action (Morrow 2018) includes consideration of the historical findings of these reports.

### ***3.5.2 Existing Conditions***

#### **3.5.2.1 Air Quality Standards**

The U.S. Environmental Protection Agency (EPA) has established nationwide air quality standards to protect public health and welfare. These federal standards, known as National Ambient Air Quality Standards (NAAQS), represent the maximum concentrations designed to protect public health for six criteria pollutants: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter (PM) (respirable particulate matter less than or equal to 10 micrometers in diameter [PM10] and respirable particulate matter less than or equal to 2.5 micrometers in diameter [PM2.5]).

NAAQS are stated in terms of both primary and secondary standards for most of the regulated air pollutants. Primary standards are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, which includes protection against decreased visibility, and damage to animals, crops, vegetation, and buildings (HDOH 2015).

The EPA requires that States monitor the ambient air to determine attainment of the NAAQS and to regulate sources that emit these and other pollutants. The HDOH Clean Air Branch (CAB) is responsible for implementing air pollution control in Hawaii and has established State Ambient Air Quality Standards (SAAQS). In contrast to the NAAQS, SAAQS are given in terms of a single

standard that is designed “to protect public health and welfare and to prevent the significant deterioration of air quality.”

Each of the regulated air pollutants has the potential to create or exacerbate some form of adverse health effect or to produce environmental degradation when present in a sufficiently high concentration for prolonged periods of time. The NAAQS and SAAQS are described in Table 3-9.

**Table 3-9 State and Federal Ambient Air Quality Standards**

Pollutant	Time Interval	Maximum Allowable Concentration		
		SAAQS	NAAQS Primary Standard	NAAQS Secondary Standard
Carbon Monoxide	1-hour average	9 ppm	35 ppm	-
	8-hour average	4.4 ppm	9 ppm	
Hydrogen Sulfide	1-hour average	25 ppb	-	-
Nitrogen Dioxide	1-hour average	-	100 ppb	-
	Annual average	0.04 ppm	53 ppb	53 ppb
Lead	3-month average	1.5 µg/m <sup>3</sup> (calendar quarter)	0.15 µg/m <sup>3</sup> (running 3-month)	0.15 µg/m <sup>3</sup> (running 3-month)
Ozone	8-hour rolling average	0.08 ppm	0.070 ppm	0.070 ppm
PM10 <sup>1</sup>	24-hour block average	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual average	50 µg/m <sup>3</sup>	-	-
PM2.5	24-hour block average	-	35 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>
	Annual average		12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Sulfur Dioxide	1-hour average	-	75 ppb	-
	3-hour average	0.5 ppm	-	0.5 ppm
	24-hour block average	0.14 ppm	-	-
	Annual average	0.03 ppm	-	-

ppm = parts per million by volume; ppb = parts per billion by volume; µg/m = micrograms per cubic meter of air; - = No NAAQS or SAAQS Standard; <sup>1</sup> Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, U.S. EPA revoked the annual PM10 standard on December 17, 2006. However, the State of Hawaii still has an annual standard.

Source: HDOH 2015.

### 3.5.2.2 Regional Air Quality

Regional air quality is generally excellent year-round as indicated by air monitoring data reported by HDOH and the West Oahu Air Monitoring Network.

### **HDOH Kapolei Air Monitoring Station**

HDOH currently operates 14 ambient air monitoring stations on four of the major islands. There are four stations located on Oahu (Figure 3-17). The closest station to the Project Site is located at Kapolei, which is about 8 miles southeast of the Project Site. The Kapolei station measures: ozone, nitrogen dioxide, carbon monoxide, lead, and PM. The closest station that measures Hydrogen Sulfide is in Puna, Island of Hawaii.

Annual summaries of air quality measurements at the Kapolei monitoring station were published by HDOH until 2015. HDOH air quality data indicates that the SAAQS and NAAQS were met at the Kapolei Monitoring Station from 2010 to 2015 for all measured pollutants (HDOH 2011, 2012, 2013, 2014, 2015, and 2016).

### **West Oahu Air Monitoring Network**

The HECO West Oahu Air Monitoring Network (<http://www.westoahuaire.com/>) operates three ambient air monitoring stations in Waianae, Lualualei, and Timberline (Figure 3-18). Air quality data is reported in real time and for the previous 30 days. The closest station, Lualualei, is located 2 miles west of the Project Site. All three stations monitor for five major pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, and PM<sub>2.5</sub> as well as wind speed, wind direction, ambient temperature, and precipitation.

HECO uses the Air Quality Index (AQI) to report air quality. The AQI ranges from 0 to 500 and indicates health effects that may be experienced within a few hours or days after breathing polluted air. The higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 represents good air quality with little potential to affect public health, while an AQI value over 300 represents hazardous air quality. AQI values below 100 are generally thought of as satisfactory.

In April 2019, the AQI history for the past 30 days was assessed for the three monitoring stations. All five pollutants had an AQI of below 50, meaning air quality was considered satisfactory, and air pollution posed little or no risk (HECO 2019).

#### **3.5.2.3 Air Quality at the Project Site**

This section summarizes the findings of the four air quality impact and monitoring reports prepared for PVT ISWMF between 2010 and 2015. The reports conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality. Measurements of Total Suspended Particulate (TSP), PM<sub>2.5</sub> and PM<sub>10</sub> meet SAAQS and NAAQS standards.

### Air Monitoring, PVT Land Company, Summary Report, November 2009 through November 2010 (Morrow 2010)

The monthly reports summarize the results of air monitoring data at PVT ISWMF between November 2009 and November 2010 (Morrow 2010). The air monitoring program was conducted in accordance with EPA guidelines and studied TSP at the boundary between the facility and the adjacent residential neighborhood (Figure 3-19). TSP (i.e., dust) includes particulates of varying sizes from 0.01-100 µm and larger. Research on the health effects of TSP in ambient air has focused increasingly on smaller diameter particles that can be inhaled into the respiratory system, i.e., PM10 and PM2.5).

Portable air samplers were located at three sites on PVT property (Figure 3-19). The samplers were mounted on top of the existing dust barrier fence and collect total TSP on 47-millimeter glass fiber filters from midnight to midnight on sample days. The results of the air monitoring are shown in Table 3-10 and the report concluded (Morrow 2010):

- All of the 24-hr TSP concentrations from November 2009 through November 2010 “were well below the earlier TSP standard and the current state and federal PM10 standards.”
- “The measured TSP concentrations were also lower than the existing maximum PM10 concentrations measured by the HDOH at other leeward Oahu sites.” The HDOH monitoring sites are in Pearl City and Kapolei.
- “The higher mean TSP level at Station 1 near Lualualei Naval Road versus the TSP means at the other two more distant stations continues to be statistically significant. Similarly, the higher TSP levels on weekdays versus weekend days also continue to be significant.” In other words, weekday traffic from Lualualei Naval Road continues to impact air monitoring results.
- “No statistically significant correlation between wind direction and TSP concentration has yet been found.” In short, the particulate concentrations do not vary significantly with wind direction.

**Table 3-10 Cumulative TSP Concentrations (November 2009–November 2010)**

Station No.	Cumulative No. of Samples	TSP Concentrations (µg/m <sup>3</sup> )			Meets SAAQS and NAAQS Standards (< 150 µg/m <sup>3</sup> )
		Min	Max	Mean	
1	63	16.1	88.9	34.1	Yes
2	63	9.0	55.4	24.8	Yes
3	63	7.3	42.7	19.1	Yes

Source: Morrow 2010.



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**Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, October-November 2010 (Morrow 2011a) and May-June 2011 (Morrow 2011b)**

In addition to monitoring particulates, Morrow documented levels of airborne metals during landfill operations in 2010 and 2011 (2011a, 2011b). Air monitoring samples were collected at the three existing sampling locations (Figure 3-19) in accordance with EPA guidelines. TSP was collected on 47-millimeter Teflon filters. X-ray fluorescence analyses were performed on the Teflon membrane filters for 50 constituents. The reports focused on the Resource Conservation and Recovery Act (RCRA) metals (i.e., Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver), which were of concern to the HDOH. A summary of the airborne metals analysis is presented in Table 3-11.

The first study, *Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, October – November 2010*, presents an analysis of fifteen 24-hour samples for airborne metals (Morrow 2011a). Samples were collected on five operating days between October 11, 2010 and November 4, 2010. As explained in the report:

- "This initial effort to quantify airborne metal concentrations in total suspended particulate matter (TSP) samples found (1) most trace elements below [method detection limits] due to small sample size."
- The RCRA metals "were either not detected at all or were present in very small quantity."
- The levels of RCRA metals were "comparable to the levels found in PM2.5 particles monitored by the Department of Health."
- "However, since most collected TSP masses were below the [Method Detection Limit] for the X-ray fluorescence method, longer sampling times are recommended in order to increase the sample size and more accurately quantify the concentrations of these airborne metals."

The second study, *Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, May – June 2011*, presents an analysis of two 5-day samples (Morrow 2011b). Samples were collected on normal facility operating days during the May 23, 2011 and June 21, 2011 period. Samplers were run continuously for five normal work days in order to collect sufficient mass on the filters to allow quantitative analysis of the metals present. The results are in Table 3-11. As stated in the conclusions of the report:

- Chromium and lead were found "in the same concentration range as reported by the HDOH at Pearl City during the 2007–2009 period."
- The other RCRA metals (arsenic, barium, cadmium, mercury, and selenium) were found "at 'zero' or 'non-detect' levels."

- "These findings suggest that the PVT Land Company is not contributing to any unusual concentrations of RCRA metals in local air quality."

**Table 3-11 Concentration of RCRA Metals in PVT Air Samples**

RCRA Metal	Unit	October-November 2010			May-June 2011		
		Min	Max	Mean	Min	Max	Mean
Chromium	µg/m <sup>3</sup>	ND	0.0046	0.0016	0.0003	0.0023	0.0013
Arsenic	µg/m <sup>3</sup>	ND	ND	ND	ND	ND	ND
Selenium	µg/m <sup>3</sup>	ND	0.0047	0.0006	ND	ND	ND
Cadmium	µg/m <sup>3</sup>	ND	0.0066	0.0007	ND	ND	ND
Barium	µg/m <sup>3</sup>	ND	0.0246	0.0047	ND	0.0007	0.0001
Mercury	µg/m <sup>3</sup>	ND	ND	ND	ND	ND	ND
Lead	µg/m <sup>3</sup>	ND	0.0096	0.0022	0.0007	0.0048	0.0025

ND = Metals found at zero or non-detect levels.

Source: Morrow 2011a, 2011b.

#### **Nanakuli Dust Study Technical Evaluation and Recommendations, December 2011 (Tetra Tech 2011)**

On behalf of the HDOH Solid and Hazardous Waste Branch, Tetra Tech (2011) completed a dust study and evaluation of potential dust sources that may affect the Nanakuli community and surrounding areas (Figure 3-20). The study was focused on identifying potential sources of dust and providing recommendations regarding feasible and realistic alternatives to reduce fugitive dust. Tetra Tech completed a comprehensive review of all available sources of air quality data and performed other field-related and research-oriented tasks to:

- identify and evaluate the level of dust in the area;
- evaluate potential health concerns related to dust; and
- compare dust concentrations with other areas on Oahu.

Tetra Tech conducted site visits and reconnaissance to observe and document PVT ISWMF on-site conditions that may lead to the formation and transport of dust. The firm also distributed a questionnaire and performed homeowner interviews so that residents had the opportunity to express their concerns, ask questions, and discuss dust issues. Collection of additional air quality or meteorological data was not within the scope of this study (Tetra Tech 2011).

As stated in the conclusion and explained in detail in the assessment (Appendix C):

- "Dust on the leeward side of Oahu cannot be avoided altogether. Depending on the time of year and uncontrollable weather conditions, exposed areas of surface soil will result in

airborne dust. As a result, the potential sources of dust that have been identified in this report focus on human activity that can be identified and addressed.”

- The study identified the following potential sources of dust:
  - “Commercial and industrial sources, located along Lualualei Road, including PVT and WOA;
  - Roadway sources, predominantly along Lualualei Road, between Farrington Highway and PVT Landfill;
  - Residential yards, which are unvegetated (bare dirt), including the focus neighborhood; and
  - Other commercial, agricultural, and residential areas with unvegetated properties in the mixed-use area along Hakimo Road.”
- “Dust presents a nuisance for the residents of Nanakuli when wind conditions facilitate transport and deposition from potential dust sources. However, based upon a review of all available data, and a review of the on-site conditions, the dust does not pose a health concern.”
- “Some of the dust appears to be tied directly or indirectly to emissions from Lualualei Road, PVT, WOA, and commercial agriculture. Site visits performed during this study, including PVT and WOA, indicated that there are dust emissions as a result of these operations.”
- “Air monitoring data provided by PVT indicates that dust in the vicinity of the fenced boundary between PVT and the abutting neighborhood to the west does not pose a health concern. Further, a review of the data and methods indicates that the data is collected in accordance with sound scientific principles, applicable U.S. EPA methods, and professional standards of care, resulting in representative air quality data”.

The Tetra Tech report also presented recommendations to help reduce potential fugitive dust emissions. PVT has implemented all recommendations related to their operations including:

- Paving of unpaved roads;
- Applying water to exposed areas on a routine basis, which results in dust reduction; and
- Vegetation or applying ground cover on unused slopes of the landfill area.

### Air Quality Impact Report, Proposed Operations Expansion PVT Integrated Solid Waste Management Facility (Morrow 2015)

Morrow prepared a 2015 *Air Quality Impact Report* to model and assess the ambient air quality impact of landfill operations at changing elevations. The report was completed as part of a 2015 project to increase the landfill height at the PVT ISWMF to 255 feet amsl. Morrow used the U.S. EPA recommended computer model AERMOD to predict and assess TSP emission rates from 2015 through 2024. Since there is no longer an air quality standard for TSP, the factor was adjusted to estimate emission rates for PM<sub>10</sub> and PM<sub>2.5</sub>, for which there are current air quality standards. Dust control is a routine activity at PVT and a conservative control efficiency of 70% was assumed based on low TSP levels measured at the PVT ISWMF during the 2010 and 2011 monitoring studies. Morrow used 2015 PM<sub>10</sub> and PM<sub>2.5</sub> data from the HDOH Kapolei Monitoring Station as background values to be combined with the AERMOD modeling results.

Morrow's 2015 Air Quality Impact Report concluded:

- "The results of the modeling analysis are summarized in (Table 3-12) and indicate compliance with federal and state ambient air quality standards."
- "Raising the elevation of a single source of emissions in flat terrain would normally result in lower ground level concentrations of emissions due to dilution in a greater air volume. In this case, the situation was complicated by multiple sources at different elevations and surrounding terrain that was not perfectly flat; thus the changes in concentrations due to changes in source elevation, besides being very small, were not consistently positive or negative."
- "The modeling results can also be considered conservative given that the previously cited 1-year onsite monitoring program at three PVT sites yielded low concentrations of TSP. The monitored annual TSP average of 25.4 µg/m<sup>3</sup> and a maximum 24-hr concentration of 88.9 µg/m<sup>3</sup> when converted to PM<sub>10</sub> levels would be approximately 12.9 µg/m<sup>3</sup> and 45.3 µg/m<sup>3</sup>, respectively and thus significantly lower than the modeled PM<sub>10</sub> concentrations."
- "We therefore conclude that PVT's proposed expansion, with increased elevations at the Project Site, will not have a significant impact on air quality."

**Table 3-12 PVT ISWMF AERMOD Modeling Results Summary 2015-2024**

	Maximum Concentrations (µg/m <sup>3</sup> )									
	24-hr Average					Annual Average				
	Min	Max	Mean	SAAQS Standard	NAAQS Standard	Min	Max	Mean	SAAQS Standard	NAAQS Standard
PM <sub>2.5</sub>	23.9	26.6	26.2	None	35 µg/m <sup>3</sup>	3.3	3.5	3.4	None	12 µg/m <sup>3</sup>
PM <sub>10</sub>	102.8	117.1	109.0	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	19.0	20.9	20.1	50 µg/m <sup>3</sup>	None

Source: Morrow 2015.

#### **3.5.2.4 Human Health Risk Assessments for PVT Operations**

This section summarizes five human health risk assessment reports, listed under Section 3.5.1, *Methodology*, conducted for PVT ISWMF operations

Collectively, the reports assess the potential impact of various PVT operations on the health of PVT workers and residents downwind of PVT operations. The reports assessed dust emissions from specific operations conducted at the facility (e.g. acceptance and disposal of contaminated soils, recycling, MRD, beneficial use of AES and Biomass Energy Systems, Inc [BESI] ash).

Both carcinogenic and noncarcinogenic risks were assessed. Potential estimated lifetime cancer risks were compared to the U.S. EPA and HDOH regulatory level of concern of one excess death in 100,000 people for commercial and industrial workers and one excess death in 1,000,000 people for residential receptors. In other words, a one in 1,000,000 probability that a resident will develop cancer in his or her lifetime, over and above the background cancer rate, as a result of potential site-related exposure. The risk to individuals generally should not exceed one in 10,000. Estimated noncarcinogenic risks were calculated as the sum of all hazard quotients of each chemical of potential concern at the site. A total hazard index of 1 is the regulatory level of concern per U.S. EPA and HDOH criterion.

The reports conclude that fugitive dust does not pose a health concern to PVT employees or residents downwind of PVT operations.

#### **Human Health Risk Assessment of Fugitive Dust and Surface Soils, PVT Landfill, June 2005 (AMEC 2005)**

This Human Health Risk Assessment was prepared by AMEC (2005) for the HDOH Hazard Evaluation and Emergency Response (HEER) Branch. The purpose of the study was to determine if fugitive dust from contaminated soils delivery or disposal at PVT ISWMF poses a long-term health risk to downwind residents. The study considered: 1) potential soil impacts to residential access roads during contaminated soil delivery, 2) potential soil impacts via wind dispersion during disposal operations, and 3) potential soil impacts via wind erosions of the landfill surface if contaminated deliveries are left uncovered following disposal.

Respirable dust concentrations (PM10) were measured by active air monitoring and real-time personal DataRAM, and chemical analytical data was obtained from contaminated soil samples. Chemical concentrations were modeled to residential locations using the U.S. EPA SCREEN3 air dispersion model. The findings were compared to the U.S. EPA Residential Soil Preliminary Remediation Goals (PRGs) and NAAQS.

Potential health risks (carcinogenic and noncarcinogenic) via inhalation were estimated for hypothetical adult and child residents who live a quarter mile downwind of operations at PVT ISWMF.

The results of this assessment are shown in Table 3-13 and summarized below:

- “Activities associated with contaminated soil disposal do not pose a significant health risk to residents in the nearby community.”
- “Analytical data from soil samples taken at the entrance gate were far below their Residential Soil Preliminary Remediation Goals. PRGs are risk-based concentrations in soil, tap water or ambient air that if not exceeded indicate that health effects are not likely to occur.”
- “Annual average [particulate concentration] is significantly lower than the NAAQS PM10 annual limit.” In addition, for chemical concentrations in the dust, “all concentrations were below their respective PRGs.”
- The risk assessment evaluated the health effects of nine chemicals of potential concern: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver and PCBs. “The use of overly protective exposure assumptions was used to demonstrate that even under the conditions assumed in the risk assessment, risks were negligible.”
- “Noncarcinogenic risk values for all receptors resulted in Hazard Indices orders of magnitude lower than the U.S. EPA and HDOH regulatory level of concern of 1.0.”
- Estimated carcinogenic risks “do not exceed the [HDOH] regulatory benchmark for residential sites and are well below the U.S. EPA’s target risk range.”
- A separate lead risk assessment was performed, and it found that lead exposure was “well below the acceptable benchmark level.”
- The risk assessment demonstrated “that the disposal of soil containing heavy metals and PCBs at previously accepted concentrations or industrial PRGs (for PCBs, below 50 ppm) is an acceptable practice that does not compromise public health in any way.”

**Table 3-13 Carcinogenic and Noncarcinogenic Risk of Contaminated Soil**

Receptor	Carcinogenic Risk		Noncarcinogenic Risk	
	Regulatory Level of Concern	Assessed Risk	Regulatory Level of Concern	Assessed Risk
<b>Soil Disposal Activities</b>				
Adult Resident inhalation exposure	1 in 1,000,000	0.03 in 1,000,000	1	.006
Child Resident inhalation exposure	1 in 1,000,000	0.05 in 1,000,000	1	.02
<b>Unlimited Erosion Model</b>				
Adult Resident inhalation exposure	1 in 1,000,000	0.0001 in 1,000,000	1	.00003
Child Resident inhalation exposure	1 in 1,000,000	0.0002 in 1,000,000	1	.00008

Adult resident = Exposure to contaminants in soil 24 hour/day, 365 days/year for a 30-year period.

Child resident = Exposure to contaminants in soil 24 hour/day, 365 days/year for a 30-year period.

Source: AMEC 2005.

#### **PVT Landfill, Human Health Risk Assessment of AES Conditioned Ash, February 2010 (AMEC 2010)**

This Human Health Risk Assessment was prepared by AMEC (2010) following a request from HDOH. This Assessment evaluated the safety of using AES conditioned coal ash as a soil replacement in various landfill operations at PVT ISWMF, including: 1) daily cover; 2) void space filling; 3) interim daily cover; and 4) liquid adsorption.

Respirable dust concentrations (PM10) were measured by active air monitoring and real-time personal DataRAM, and chemical analytical data was obtained from AES ash samples. Chemical concentrations were modeled to residential locations using the U.S. EPA SCREEN3 air dispersion model.

Potential health risks (carcinogenic and noncarcinogenic) were estimated for landfill workers directly working with ash who may inhale ash-derived dust and ingest and dermally absorb metals in ash. Potential health risks via inhalation were also estimated for hypothetical adult and child residents who live a quarter mile downwind of PVT ISWMF.

The results of this assessment are shown in Table 3-14 and summarized below:

- “All [hazard index results] were lower than the U.S. EPA and HDOH criterion goal of 1.”

- Carcinogenic “risks to the offsite residential receptors were substantially lower than the U.S. EPA and HDOH point of departure value of [1 in 1,000,000]. Risks to the two worker scenarios exceeded the point of departure value to [1 in 1,000,000] but were well below the U.S. EPA and HDOH regulatory level of concern of [1 in 100,000] for commercial and industrial workers.”
- The beneficial use of AES ash at PVT ISWMF does not pose a potentially significant threat to human health and the environment.

**Table 3-14 Carcinogenic and Noncarcinogenic Risk of AES Conditioned Ash**

Receptor	Carcinogenic Risk		Noncarcinogenic Risk	
	Regulatory Level of Concern	Assessed Risk	Regulatory Level of Concern	Assessed Risk
Worker, 8-hour inhalation, dermal and ingestion exposure	1 in 100,000	1 in 100,000	1	0.8
Worker, daily endcap inhalation, dermal and ingestion exposure	1 in 100,000	0.6 in 100,000	1	0.3
Adult Resident inhalation exposure	1 in 1,000,000	0.03 in 1,000,000	1	0.004
Child Resident inhalation exposure	1 in 1,000,000	0.02 in 1,000,000	1	0.009
Residential Total (Child + Adult)	1 in 1,000,000	0.05 in 1,000,000	1	0.01

Worker, 8-hour = Exposure to contaminants in ash 8 hours/day, 250 days/year for a 25-year period.

Worker, daily endcap = Exposure to contaminants in ash 1 hour/day, 250 days/year for a 25-year period.

Adult resident = Exposure to contaminants in ash 24 hour/day, 350 days/year for a 24-year period.

Child resident = Exposure to contaminants in ash 24 hour/day, 365 days/year for a 6-year period.

Residential Total = Exposure to contaminants in ash for 6 years as a child and 24 years as an adult.

Source: AMEC 2010.

**PVT Landfill, Limited Human Health Risk Assessment, Construction Debris Recycling, July 2010 (Environmental Risk Analysis LLC 2010)**

This Human Health Risk Assessment was prepared for PVT to address HDOH and anticipated community concerns regarding the safety of the recycling operations. The assessment evaluated dust emission generated from: 1) delivery and stockpiling of feedstock; 2) mining/reclamation of closed portions of the landfill; 3) processing, crushing and shredding of feedstock, and 4) wind erosion of on-site storage of processed material.

Respirable dust concentrations (PM10) were measured by real-time personal DataRAM and chemical analytical data was obtained from bulk material samples. Chemical concentrations were



modeled to residential locations using the U.S. EPA SCREEN3 air dispersion model. The findings were compared to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) and NAAQS.

Potential health risks (carcinogenic and noncarcinogenic) via inhalation were estimated for hypothetical adult and child residents who live a quarter mile downwind of operations at PVT ISWMF.

The results of this assessment are shown in Table 3-15 and summarized below:

- “No metals were detected in the air samples and Total Dust was detected at a concentration of 1.7 mg/m<sup>3</sup>, which is well below the OSHA PEL of 50 mg/m<sup>3</sup>.”
- “Carcinogenic Excess Lifetime Cancer Risk due to the inhalation pathway was [0.3 in 1,000,000]. This was well below the residential regulatory level of concern.”
- Noncarcinogenic health risks due to the inhalation pathways were 0.003 for both the residential adult and child receptor, both below the regulatory level of concern.
- The maximum annual average PM concentration was 0.41 µg /m<sup>3</sup>, which is well below the NAAQS standard of 50 µg/m<sup>3</sup>. “The respirable dust concentrations determined in this study are therefore far less than concentrations that cause health effects in 'sensitive' populations and are also far less than concentrations that result in nuisance concerns.”
- “The recycling program does not pose a potentially significant threat to human health and the environment.”

**Table 3-15 Carcinogenic and Noncarcinogenic Risk of C&D Debris Recycling Operations**

Receptor	Carcinogenic Risk		Noncarcinogenic Risk	
	Regulatory Level of Concern	Assessed Risk	Regulatory Level of Concern	Assessed Risk
Adult Resident inhalation exposure	1 in 1,000,000	0.3 in 1,000,000	1	0.003
Child Resident inhalation exposure		0.07 in 1,000,000		0.003
Residential Total (Child + Adult)		0.3 in 1,000,000		N/A

Adult resident = Exposure to contaminants in dust 24 hour/day, 350 days/year for a 24-year period.

Child resident = Exposure to contaminants in dust 24 hour/day, 350 days/year for a 6-year period.

Residential Total = Exposure to contaminants in dust for 6 years as a child and 24 years as an adult.

Source: Environmental Risk Analysis LLC 2010.

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**PVT Landfill, Limited Human Health Risk Assessment, Construction Debris Recycling Materials Recovery Facility, April 2015 (Environmental Risk Analysis LLC 2015)**

Environmental Risk Analysis (2015) evaluated the potential for human health impacts associated with the MRD (referred to as Materials Recovery Facility, or MRF in the Analysis) and associated operation, including airborne dust impacts during the: 1) delivery and stockpiling of debris/material; 2) separation of metal recyclables; 3) sorting of debris by size; and 4) processing, crushing, and shredding of feedstock.

Air samples were collected upwind of the MRD operations, directly within the worker area of the MRD, and at two locations downwind of the MRD operations. Chemical analytical data was obtained from the air samples. Chemical concentrations were modeled to residential locations using the U.S. EPA SCREEN3 air dispersion model. Dust concentrations and metals concentrations in dust during recycling operations were compared to OSHA PELs and U.S. EPA Regional Screening Levels (RSLs) for industrial site use and NAAQS.

Potential health risks (carcinogenic and noncarcinogenic) via the inhalation pathway were estimated for residents who live approximately a quarter mile downwind from dust generating activities.

The results of this assessment are shown in Table 3-16 and summarized below:

- “ERA has estimated health impacts to nearby residents from potential air sources originating from the recycling program and determined it is safe.”
- “Residential scenarios resulted in a noncancer hazard index of 0.003, well below the regulatory level of concern of 1.”
- “The total residential excess lifetime cancer risk (including 6 years as a child, and 20 years as an adult) was determined to be 1E-07 or a 1 in 10,000,000 probability that a resident will develop cancer in his or her lifetime, over and above the background cancer rate. This is well below the point-of-departure regulatory level of concern for residential receptors of 1 in 1,000,000.”
- “The OSHA PEL for respirable dust is 5 mg/m<sup>3</sup>. Respirable dust concentrations from the [MRD] operations were below the OSHA PEL for worker safety.”
- “Air concentrations did not exceed any industrial worker thresholds, therefore risk and hazards to PVT Landfill workers is low.”
- “The [MRD] operation does not pose a potential significant threat to human health or the environment.”

**Table 3-16 Carcinogenic and Noncarcinogenic Risk of MRD Operations**

Receptor	Carcinogenic Risk		Noncarcinogenic Risk	
	Regulatory Level of Concern	Assessed Risk	Regulatory Level of Concern	Assessed Risk
Adult Resident inhalation exposure	1 in 1,000,000	0.1 in 1,000,000	1	0.003
Child Resident inhalation exposure		0.03 in 1,000,000		0.003
Residential Total (Child + Adult)		0.1 in 1,000,000		N/A

Adult resident = Exposure to contaminants in dust 24 hour/day, 350 days/year for a 20-year period.

Child resident = Exposure to contaminants in dust 24 hour/day, 350 days/year for a 6-year period.

Residential Total = Exposure to contaminants in dust for 6 years as a child and 20 years as an adult.

Source: Environmental Risk Analysis LLC 2015.

**PVT Landfill Human Health Risk Assessment, Use of Gasification Wood and Plastic Ash, June 2017 (Environmental Risk Analysis LLC 2017)**

Environmental Risk Analysis LLC (2017) evaluated the safety of using ash derived from BESI's gasification process as a soil replacement in various landfill operations at PVT ISWMF, including: 1) daily cover; 2) void space filling; 3) interim daily cover; and 4) liquid adsorption.

Respirable dust concentrations (PM10) were obtained from AMEC's 2010 PVT Landfill Human Health Risk Assessment of AES Conditioned Ash Limited Demonstration Project and chemical analytical data was obtained from samples of feedstock ash derived from BESI's gasification operations. Chemical concentrations were modeled to residential locations using the U.S. EPA SCREEN3 air dispersion model.

Potential health risks (carcinogenic and noncarcinogenic) were estimated for landfill workers directly working with ash who may inhale ash-derived dust and ingest and dermally absorb metals in ash. Potential health risks via inhalation were also estimated for hypothetical adult and child residents who live a quarter mile downwind of operations at PVT ISWMF.

The results of this assessment are shown in Table 3-17 and summarized below:

- In the residential scenarios, "carcinogenic and noncarcinogenic risks due to the inhalation pathway were well below regulatory levels of concern."
- "The cumulative cancer risk (inhalation and direct exposure) to the worker scenario was greater than the point of departure risk value of [1 in 1,000,000] but within the regulatory risk range of [1 in 10,000 to 1 in 1,000,000]."

- “The cumulative noncarcinogenic hazard to the worker scenario was below regulatory level of concern of 1.”
- “For the landfill worker, the total cumulative carcinogenic risk and noncarcinogenic hazard index were [5 in 100,000] and 0.3, respectively.”
- “It is proposed that landfill workers working at the site would be wearing personal protective equipment during work around the ash, and all ash handling would be done by heavy equipment. The direct exposure pathways may reasonably be insignificant. Cumulative cancer risk and noncarcinogenic hazards due to the inhalation pathway alone were below the regulatory level of concern.”

**Table 3-17 Carcinogenic and Noncarcinogenic Risk of BESI Ash**

Receptor	Carcinogenic Risk		Noncarcinogenic Risk	
	Regulatory Level of Concern	Assessed Risk	Regulatory Level of Concern	Assessed Risk
Worker, 8-hour inhalation exposure	1 in 100,000	1 in 100,000	1	0.09
Worker, 8-hour dermal and ingestion exposure		4 in 100,000		0.2
Worker, 8-hour inhalation, dermal and ingestion exposure combined		5 in 100,000		0.3
Adult Resident inhalation exposure	1 in 1,000,000	0.4 in 1,000,000		0.004
Child Resident inhalation exposure		0.1 in 1,000,000		0.004
Residential Total (Child + Adult)		0.5 in 1,000,000		0.008

Worker, 8-hour = Exposure to contaminants in ash 8 hours/day, 250 days/year for a 25-year period.

Adult resident = Exposure to contaminants in ash 24 hour/day, 350 days/year for a 20-year period.

Child resident = Exposure to contaminants in ash 24 hour/day, 350 days/year for a 6-year period.

Residential Total = Exposure to contaminants in dust for 6 years as a child and 20 years as an adult.

Source: Environmental Risk Analysis LLC 2017.

### Exhaust Emissions

The PVT ISWMF generates both off-site emissions from vehicles traveling to the facility and on-site emissions from vehicles and equipment.

The primary source of off-site emissions is vehicles traveling to and from the ISWMF. Motor vehicles with gasoline-powered engines are sources of carbon monoxide. They also emit nitrogen oxides and other contaminants.

Carbon monoxide, nitrogen oxide, and other air quality measurements were made at the Kapolei monitoring station from 2010 to 2015. No exceedances of the one-hour or eight-hour NAAQS for carbon monoxide or nitrogen oxide were reported.

To evaluate the off-site emissions from vehicles during PVT operation, dispersion modeling was conducted to estimate ambient carbon monoxide concentrations along the roadways leading to and from PVT ISWMF (B.D. Neal and Associates 2007). Carbon monoxide was selected for modeling because it is both the most stable and the most abundant of the pollutants generated by motor vehicles.

The model estimated maximum one-hour and eight-hour average carbon monoxide concentrations at key intersections near the PVT ISWMF. Table 3-18 summarizes the results of the modeling and indicates that the estimated worst-case one-hour and eight-hour ambient carbon monoxide concentrations at the four study intersections do not exceed the NAAQS and SAAQS.

PVT operations also generate emissions from the on-site use of vehicles and equipment. Emissions of exhaust gases from heavy equipment operations were estimated based on an estimate of annual diesel fuel usage associated with PVT ISWMF. The estimated annual emissions were then compared to the significant emission rates defined in HAR Ch. 11-60.1 related to the operation of motor vehicles. Operational emissions from diesel exhausts are less than the defined significant emission rates.

**Table 3-18 Worst Case 1-hour and 8-hour Carbon Monoxide Concentrations at Study Intersections (mg/m<sup>3</sup>)**

Roadway Intersection	NAAQS		SAAQS		1-Hour CO Concentrations		8-Hour CO Concentrations
	1-hr	8-hr	1-hr	8-hr	AM	PM	
Farrington Highway/ Piliokahi Avenue	40	10	10	5	5.9	4.1	3.0
Farrington Highway/ Nanakuli Avenue					7.0	4.7	3.5
Farrington Highway/ Haleakala Avenue					7.6	4.5	3.8
Farrington Highway/ Lualualei Naval Road					6.4	4.7	3.2

Source: B.D. Neal and Associates 2007.

## **Odors and Landfill Gases**

Odor is ordinarily not an issue at PVT ISWMF due to the inert nature of the C&D debris accepted at the site. Potential odor sources include C&D debris containing minor amounts of decomposing organic matter or vegetative material, or some types of petroleum-contaminated soil. Per PVT's *Operations Plan*, noticeable odor is investigated to determine its source and to then be dealt with accordingly. Odorous loads are immediately identified at the scale-house and either rejected or immediately deposited and covered with non-odorous refuse or soil.

Landfill gases are produced when bacteria break down organic waste. Methane and carbon dioxide make up 90–98% of MSW landfill gas. The remaining 2–10% includes nitrogen, oxygen, ammonia, sulfides, hydrogen, and various other gases. Ammonia and hydrogen sulfide are responsible for most of the odors at MSW landfills. Methane is flammable and can combust when trapped in an enclosed space. The rate and volume of methane generated by decomposition of C&D debris is extremely low compared to MSW landfills. The organic material in C&D debris is limited primarily to wood and clearing and grubbing debris, which decays slowly. Organic materials are removed to the extent practical and recycled as feedstock for energy providers. Because of the lack of C&D landfill gases, PVT injects and sequesters carbon dioxide gas in the landfill. The carbon dioxide gas drives out oxygen, minimizing fire potential and generation of odorous gases.

Hydrogen sulfide (H<sub>2</sub>S) is a flammable, colorless gas with a characteristic rotten-egg-like odor. Humans can detect hydrogen sulfide odors at very low levels in air [i.e. 8 ppb], generally below levels that would cause health effects (EPA 2014). Hydrogen sulfide may be formed in a landfill environment through the reduction of sulfate (SO<sub>4</sub><sup>2-</sup>) by sulfate-reducing bacteria. There are several contributing factors that may result in the production of hydrogen sulfide in C&D landfills (EPA 2014). Moisture control is recommended by the US EPA to prevent the formation of hydrogen sulfide. The Project Site is in an area of low rainfall. C&D debris is characteristically dry and has little or no active organic material. PVT implements best management practices to reduce moisture in the landfill as described in Section 2.5, *Description of the Proposed Action*. PVT has surveyed the existing landfill for landfill gases and has never detected hydrogen sulfide.

### **3.5.3 Impacts**

#### **3.5.3.1 Proposed Action**

##### **Fugitive Dust Impacts**

PVT would continue to implement dust control measures at the Project Site to minimize the generation and dispersal of fugitive dust as described in Section 2.5.7.2, *Dust Control*. Reasonable precautions to control fugitive dust are determined on a case-by-case basis. The site topography and surroundings, soil conditions, meteorological conditions, site activities, site equipment, and types of material processed are considered.

In the short-term, during site development and initial grading, there would be dust generated at the Project Site while PVT ISWMF continues to operate. This would have a less than significant short-term direct impact on the ambient air quality, when dust control measures are implemented. In the long-term, the Proposed Action would have no impact to ambient air quality relative to the existing conditions. The sources and constituents of fugitive dust would not differ substantially from existing conditions.

Fugitive dust impacts of future landfill operations were evaluated by Jim Morrow in a 2019 *Air Quality Impact Report completed for the PVT Integrated Solid Waste Management Facility Relocation Project* (Appendix B). Morrow used the U.S. EPA-recommended computer model, AERMOD, to evaluate emissions from landfill operations at changing elevation.

Morrow's 2019 Air Quality Impact Report concluded:

- "The results of the modeling analysis are summarized in (Table 3-19) and indicate compliance with federal and state ambient air quality standards."
- "The modeling results are also comparable to the results of a recent 1-year onsite monitoring program conducted at the existing PVT site. Concentrations of total suspended particulate matter (TSP) were recorded which when converted to PM10 ranged 12.3 to 84.3 µg/m³ for 24-hour maxima and 33.1 to 43.7 µg/m³ for annual values, thus being of the same order of magnitude as the modeled PM10 concentrations presented herein."
- "We therefore conclude that PVT's proposed relocation of operations will not have a significant impact on existing air quality."

**Table 3-19 AERMOD Modeling Results Summary 2022-2040**

	Maximum Concentrations (µg/m³)							
	24-hr Average				Annual Average			
	Min	Max	SAAQS Standard	NAAQS Primary Standard	Min	Max	SAAQS Standard	NAAQS Primary Standard
PM2.5	14.5	23.9	None	25 µg/m³	4.1	5.5	None	12 µg/m³
PM10	40.2	134	150 µg/m³	150 µg/m³	15.9	30.2	50 µg/m³	None

Source: Morrow 2015.

Furthermore, three human health risk assessments were completed for dust emission from the disposal of contaminated soils (AMEC 2005), beneficial use of AES ash (AMEC 2010), and beneficial use of BESI ash (Environmental Risk Analysis LLC 2017). All three reports concluded that these operations do not pose a health concern to nearby residents or PVT workers.

The expanded recycling operations may contribute to fugitive dust as debris is manually and mechanically sorted. However, PVT would continue to implement the existing dust control measures, and the expanded recycling operations are not anticipated to significantly increase fugitive dust above the baseline data (Section 3.5.2, *Existing Conditions*). Furthermore, Human Health Risk Assessments for C&D debris recycling operations (Environmental Risk Analysis LLC 2010) and the MRD (Environmental Risk Analysis LLC 2015) estimated health impacts to nearby residents and PVT workers. These reports concluded that neither the recycling operations nor the MRD pose a health concern.

The renewable energy projects are not anticipated to generate fugitive dust.

The Proposed Action would not increase traffic to the Project Site, which is capped at 300 haul trucks per day. The average daily traffic volume on Lualualei Naval Road is approximately 9,000 vehicles per day. Therefore, PVT-bound haul trucks make up, at most, approximately 3% of the total daily vehicles on Lualualei Naval Road. Monitoring data from 2010 and 2011 (Morrow) and a 2011 Nanakuli Dust Study (Tetra Tech) indicates that while traffic on Lualualei Naval Road is a source of dust in the community, the dust does not pose a health concern. Once on-site, the dust controls measures described above would minimize fugitive dust.

PVT takes reasonable precautions to minimize dust per its SWMP. Additional mitigation measures are not necessary. The Proposed Action is anticipated to have a less than significant, short-term, direct adverse impact on fugitive dust. No long-term, direct or indirect impacts are anticipated.

### **Exhaust Emissions**

The Proposed Action would not generate significant emissions from the on-site use of vehicles and equipment and off-site traffic. The Proposed Action is anticipated to have no short- and long-term, direct and indirect impacts due to emissions generated by relocated operations.

The primary source of off-site emissions would be vehicles traveling to and from the Project Site. Motor vehicles with gasoline-powered engines are sources of carbon monoxide. A 2007 (B.D. Neal and Associates 2007) study modeled vehicle emissions along the roadways leading to and from PVT ISWMF and indicated that the estimated worst case one-hour and eight-hour ambient carbon monoxide concentrations would not exceed the NAAQS and SAAQS. The conditions of the B.D. Neal and Associates study are applicable to the Proposed Action. As described in Section 2.5.5.4, *Hybrid Heavy Equipment*, PVT plans to replace their heavy equipment and other vehicles with hybrid and electric vehicles as they reach the end of their service life. This would further reduce vehicle emissions.

Emissions from the gasification unit or anaerobic digestion system were determined to be de minimis and would be subject to the conditions of a noncovered source permit. Syngas generates very low levels of tar, particulates, nitrogen oxide, carbon monoxide and VOCs compared to fossil fuel combustion, which is currently used to power recycling operations. Both renewable energy



systems are designed with a gas cleanup process to keep air emissions well below the regulatory requirements. The proposed renewable energy systems would minimize the use of fossil-fuel powered generators and HECO services to power PVT operations, overall reducing exhaust emissions from power generation.

### Odors and Landfill Gases

Odor is not anticipated to be an issue with the Proposed Action due to the inert nature of C&D debris accepted at the site. As described above, potential odor sources include C&D debris containing decomposing organic matter or vegetative material, or some types of petroleum-contaminated soil. The Proposed Action would be a continuation of the existing odor and landfill gas management plans outlined in PVT's *Operations Plan* and would not change the type or volume of C&D debris accepted at the facility. The anerobic digestion system and the gasification unit would be fed with non-odorous feedstock and/or fuel crops and are not anticipated to generate odors. Therefore, the Proposed Action is anticipated to have no short- and long-term, direct and indirect odor or landfill gas impacts.

#### 3.5.3.2 No Action Alternative

Under the No Action Alternative, the PVT ISWMF would continue to operate until closure. Therefore, short-term, direct or indirect impacts to air quality would not differ from existing conditions. There would be a long-term, beneficial direct and indirect impact to air quality as the PVT ISWMF would close, the landfill area seeded, and haul truck traffic to the PVT ISWMF operations would cease.

### 3.5.4 Summary of Impacts and Potential Mitigation

PVT would continue to implement the BMPs, operational controls and regulatory requirements of the existing facility at the Project Site. The Proposed Action would not alter existing ambient air quality conditions; but would relocate the PVT sources of fugitive dust and other emissions to the Project Site. No additional mitigation measures are recommended or necessary.

**Table 3-20 Air Quality Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Fugitive Dust	<	0	0	0	none	+	+
Exhaust Emissions	0	0	0	0	none	+	+
Odor	0	0	0	0	none	+	+
Landfill Gases	0	0	0	0	none	+	+

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 3.6 Noise

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on noise.

### 3.6.1 Methodology

D. L. Adams Associates, Ltd. (D.L. Adams) prepared an *Environmental Noise Assessment Report* (2018) for the Proposed Action, included as Appendix D. The following tasks were completed by D.L. Adams in their assessment:

1. Measure continuous long-term noise levels at the Project Site and PVT ISWMF to establish a baseline of existing noise levels in the area. Figure 3-21 shows the noise measurement locations.
2. Develop sound propagation models to predict future operational and vehicular traffic noise under two scenarios:
  - Current Operations: Operations at the PVT ISWMF.
  - Relocation: Relocation of the C&D waste receiving, materials sorting/recycling, C&D disposal, MRD lines, gasification unit, and PV system to Project Site.

The CadnaA noise prediction software by DataKustik GMBH was used to predict the likely operational noise effects to receptor locations surrounding the Project Site (Figure 3-22). The sound propagation model is based on the International Standards Organization (ISO) 9613, Part 2, which is a standard for calculating outdoor noise propagation. The input parameters for the sound propagation model are summarized in Appendix D and included site topography, ground absorption, and meteorological conditions. The sound propagation models were created with a conservative approach that assumed worst case scenarios. Parameters were set for predictions of noise levels based on all sources of noise operating simultaneously and continuously through the operational time period.

3. Prepare an *Environmental Noise Assessment Report* (Appendix D).

### 3.6.2 Existing Conditions

#### 3.6.2.1 Noise Definitions

Sound is described in terms of intensity or amplitude (measured in decibels), frequency or pitch (measured in Hertz or cycles per second), and duration (measured in seconds or minutes). Noise is defined as unwanted sound. Several descriptors exist to measure and describe noise levels:

- **Decibel (dB)** is used to measure sound level. Normal conversation is about 60 dB, a lawn mower is about 90 dB, and a loud rock concert is about 120 dB.

- **A-weighted decibel scale (dBA)** is most commonly used for community noise measurements, as it most closely resembles human perception of noise by weighting the most audible frequencies more heavily. The dBA scale is logarithmic; in other words, a noise difference of 3 dBA is barely perceptible to the human ear, while a difference of 10 dBA is perceived at twice as loud.
- **Equivalent noise level ( $L_{eq}$ )** is a sound energy level averaged over a specified time period (usually one hour).  $L_{eq}$  is a single numerical value that represents the amount of variable sound energy received by a receptor during the time interval.
- **Maximum operating noise levels ( $LA_{max}$ )** represent the maximum noise levels at any one moment in time that a receptor would expect to experience from the Proposed Action based on typical daily operations.

### 3.6.2.2 Noise Standards

The State of Hawaii Community Noise Control Rule (HAR Ch. 11-46) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources and noise related to agricultural, construction, and industrial activities, which may not be stationary. The maximum permissible noise levels for stationary mechanical equipment are enforced by the HDOH for any location at or beyond the property line and shall not be exceeded for more than 10% of the time during any 20-minute period. The specified noise limits which apply are a function of the zoning and time of day as shown in Table 3-21. With respect to mixed zoning districts, the rule specifies that the primary land use designation shall be used to determine the applicable zoning district class and the maximum permissible sound level. In determining the maximum permissible sound level, the background noise level is taken into account by HDOH.

The Community Noise Control Rule does not address most *moving* sources, such as vehicular traffic noise, aircraft noise, or rail transit noise. These moving sources are regulated by the Hawaii Department of Transportation (HDOT).

**Table 3-21 HDOH Maximum Permissible Sound Levels for Various Zoning Districts**

Zoning District	Day Hours (7 AM - 10 PM)	Night Hours (10 PM - 7 AM)
<b>CLASS A:</b> Residential, Conservation, Preservation, Public Space, Open Space	55 dBA (Exterior)	45 dBA (Exterior)
<b>CLASS B:</b> Multi-Family Dwellings, Apartments, Business, Commercial, Hotel, Resort	60 dBA (Exterior)	50 dBA (Exterior)
<b>CLASS C:</b> Agriculture, Country, Industrial	70 dBA (Exterior)	70 dBA (Exterior)

Source: D. L. Adams 2018.

The Proposed Action is in a Class C industrial/agricultural zoned area; therefore, the permissible day and nighttime noise levels are 70 dBA. Surrounding the Project Site are Class A residential and Class C industrial/agricultural zoned areas.

### 3.6.2.3 Community Response to Change in Noise Level

Sensitivity to sound is highly individualized and depends on frequency, content, time of occurrence, duration, and psychological factors such as emotions and expectations. However, the average ability of individuals to perceive changes in noise levels is well documented and has been summarized in Table 3-22. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

**Table 3-22 Average Ability to Perceive Changes in Noise Level**

Sound Level Change (dB)	Human Perception of Sound
0	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	Two times (or 1/2) as loud
20	Four times (or 1/4) as loud

Source: D. L. Adams 2018.

A commonly applied criterion for estimating a community's response to changes in noise level is the "community response scale" proposed by the ISO. The scale shown in Table 3-23 relates changes in noise level to the degree of community response and allows for direct estimation of the probable response of a community to a predicted change in noise level.

**Table 3-23 Community Response to Increases in Noise Levels**

Sound Level Change (dB)	Category	Response Description
0	None	No observed reaction
5	Little	Sporadic Complaints
10	Medium	Widespread Complaints
15	Strong	Threats of Community Action
20	Very Strong	Vigorous Community Action

Source: D. L. Adams 2018.

The values stated in Tables 3-22 and 3-23 are not regulatory requirements. However, these tables are useful in assessing the human perception to changes in sound levels and are used here to supplement the governing Hawaii Community Noise Control Rule, which does not discuss community response to changes in noise levels.

### 3.6.2.4 Existing Noise Levels

Continuous long-term noise level measurements were conducted from November 8, 2018 to November 15, 2018 to assess the existing acoustical environment of the Project Site (Figure 3-21). The range of  $L_{eq}$  during operational days and non-operational days between the hours of 7 AM and 3 PM are summarized for each location in Table 3-24 below. PVT ISWMF operates between 7 AM and 4 PM, which is within the daytime hours defined by the HDOH. In this case, nighttime and evening noise calculations are not needed. If the PVT ISWMF extends its hours of operation to before 7 AM or beyond 10 PM, nighttime evaluations may be required.

**Table 3-24 Summary of Long-Term Noise Measurement Results (dBA)**

Measurement Location	Operational Days (7 AM - 3 PM)		Non-Operational Days (7 AM - 3 PM)	
	$L_{eq}$ Range	Average $L_{eq}$	$L_{eq}$ Range	Average $L_{eq}$
L1 - Near Scale House	54-58	56	46-55	51
L2 - South of Project Site	45-55	48	42-52	48

Source: D. L. Adams 2018.

The long-term noise measurements at both locations were within HDOH permissible daytime noise levels for Class C zoned districts.

### 3.6.3 Impacts

#### 3.6.3.1 Proposed Action

##### Noise Levels

The sound propagation model calculated noise levels at 11 receptor locations in the vicinity of the Project Site (Figure 3-22). Table 3-25 summarizes the results of the noise analysis calculations for each of the noise receptor locations and presents the change in future noise levels for the community due to the Proposed Action. In addition to the receptor locations, maximum noise level area contours were calculated throughout the project site and the surrounding community for each of the operational stages. These contours are shown graphically in Figure 3-23.

**Table 3-25 Operational Noise Analysis Results**

ID	Receptor Location	Zone District (HDOH Limit dBA)	Max. Operational Noise per Stage (dBA)		Change due to the Proposed Action (dB)
			Current Operations	Relocation	
R1	Mohihi St (SE)	Residential: 55 dBA	63	59	- 4
R2	Mohihi St (NW)	Residential: 55 dBA	59	53	- 6
R3	Ulehawa Rd	Ag/Industrial: 70 dBA	56	47	- 9
R4	Kapiki Rd	Ag/Industrial: 70 dBA	56	50	- 6
R5	Kuualoha Rd	Ag/Industrial: 70 dBA	62	51	- 11

<b>R6</b>	<b>North Property Line</b>	<b>Ag/Industrial: 70 dBA</b>	<b>71</b>	58	<b>- 13</b>
<b>R7</b>	<b>Lualualei Naval Rd.</b>	<b>Residential: 55 dBA</b>	<b>67</b>	<b>67</b>	<b>0</b>
<b>R8</b>	<b>Farrington Hwy (N)</b>	<b>Residential: 55 dBA</b>	<b>71</b>	<b>71</b>	<b>0</b>
<b>R9</b>	<b>Farrington Hwy (S)</b>	<b>Ag/Industrial: 70 dBA</b>	<b>71</b>	<b>71</b>	<b>0</b>
R10	Housing Dev. (N)	Residential: 55 dBA	51	52	+ 1
R11	Housing Dev. (E)	Residential: 55 dBA	51	52	+ 1

**Bold** = Exceeds HDOH maximum daytime noise levels for the zone district.

Source: D. L. Adams 2018.

- **Residential Receptor Locations Southwest of the Project Site (R1, R2, R7, and R8).** The residential zoned area located on the southeastern portion of Mohihi Street near Lualualei Naval Road show noise levels in excess of the HDOH maximum daytime noise limit for residentially zoned areas (55 dBA) under both the Current Operations and Relocation scenarios. The primary noise source for these areas is vehicular traffic, which is not enforced by the HDOH (Figure 3-23). With the Proposed Action, the noise levels at the Mohihi Street residences near the existing PVT ISWMF boundary (R1 and R2) are expected to decrease 4 – 6 dB. This is due to the reduction in truck traffic along the southwestern PVT ISWMF roadway when operations are relocated to the Project Site.
- **Agriculture/Industrial Zoned Receptor Locations West of the Existing Site (R3, R4, and R5).** The properties to the west of the Project Site are zoned for agricultural use and are in compliance with the 70 dBA maximum noise levels for Class C agricultural/industrial zoning under both the Current Operations and Relocation scenarios. With the Proposed Action, noise levels are expected to decrease by as much as 11 dB at western receptors due to the redistribution of PVT truck traffic. Noise levels at these locations are calculated to be below HDOH limits for both agricultural and residential zones after relocation. When MRD-1 is active (approximately twice per year), noise levels will likely be similar to the existing conditions.
- **Agriculture/Industrial Zoned Receptor Location North of the Site (R6).** The properties to the north of the Project Site are also zoned for agricultural/industrial uses. Noise levels at R6 are in excess of the HDOH maximum daytime noise limit for agricultural/industrial zoned areas (70 dBA) under Current Operations. Noise is generated by traffic on Lualualei Naval Road, PVT's existing MRD-1 operations, and the neighboring West Oahu Aggregate Facility (Figure 3-23). With the Proposed Action, noise levels are expected to decrease significantly (13 dB) due to the reduction of truck traffic and regular MRD-1 operation. However, overall combined noise levels at locations north of the existing PVT landfill will likely stay relatively the same after relocation due to noise generated by industrial activities at the neighboring property to the north.
- **Residential Receptor Locations South of the Project Site (R10 and R11).** The residential properties to the south of the Project Site are in compliance with the 55 dBA maximum noise levels for Class A residential zoning under both the Current Operations and Relocation

scenarios. Noise levels are anticipated to increase slightly (+1 dB) due to the relocated PVT operations, mostly due to the truck traffic on the new access and scale house road near the southern end of the Project Site. At residential buildings and neighborhoods further south of the northernmost multi-family buildings, no noticeable noise impact is expected.

Based on the results of the operational noise analysis, the predicted operational noise levels from the Proposed Action comply with the HDOH maximum permissible noise limits at the property line for Class C zoning. At residences east of Lualualei Naval Road, the relocation of PVT activities to the Project Site is calculated to reduce noise levels. In general, the overall noise impact on the surrounding area will be reduced, as the new operations will be more remote from most of the nearest residential properties. At the residential area south of the new Project Site, a slight increase in noise level (1 dB) is expected, but not enough to provide a noticeable noise impact. A change of 3 dB or less is generally considered just below the threshold of human perception and therefore insignificant.

The proposed gasification unit and anaerobic digestion system are designed to operate continuously. During non-operational hours, the renewable energy system would operate in idle mode and would not produce power. On idle mode, the BESI TURNW2E gasifier would have less than 45 dba sound level (Mathew 2019). The noise generating components of the anaerobic digestion system would be located indoors and operate at noise levels below 40 dba (Pritchard 2019). The gasification unit or anaerobic digestion system would be located at the north end of the Project Site and the nearest property line maximum permissible nighttime noise levels is 70 dBA for Agriculture. DL Adams does not anticipate a significant nighttime noise impact (Patrick 2019).

While not required to meet HDOH requirements or prevent a significant noise impact, BMPs would be implemented to avoid and minimize noise impacts on sensitive receptors (Section 2.5.7.6, *Noise Control*).

### **Ground-Borne Vibration**

Heavy equipment activities generate not only audible airborne sounds but can also result in varying degrees of ground vibration depending on the equipment and methods employed. The Noise Impact Assessment does not assess human or structural responses to potential ground-borne vibration due to PVT operations.

Vibration induced by the specific mobile equipment used for the Proposed Action would not likely result in adverse effects on people or structures. During site operations, noise from the C&D debris moving equipment will likely be more noticeable than any perceived vibration. The MRD equipment operates a large shaker producing large vibrations in the equipment. The concrete pad that supports the MRD equipment meets similar standards that the Federal Aviation Administration (FAA) requires for runways, taxiways, and apron areas at airports. This increased standard for design and construction of the MRD (i.e., higher quality Portland cement, seamless

thicker pad) provides added sound vibration damping qualities as a PVT BMP measure. It is not expected that this equipment will produce any adverse effects to the surrounding area.

### 3.6.3.2 No Action Alternative

The No Action Alternative would have no short-term, direct or indirect noise impact. The PVT ISWMF would continue to operate and predicted noise levels would be as described for the Current Operations scenario. There would be a beneficial long-term, direct and indirect impact on noise levels as the PVT ISWMF would be closed, eliminating the noise associated with PVT operations and traffic.

### 3.6.4 Summary of Impacts and Potential Mitigation

The Proposed Action is anticipated to have less than significant short-term, direct and indirect adverse impacts as PVT operations would largely remain at the existing PVT ISWMF site during construction. Once operations relocate to the Project Site, noise levels are expected to decrease west and north of the Project Site as PVT activities are relocated further from most surrounding occupied properties. This is a long-term, indirect, beneficial impact on noise level for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the new PVT scale house area, which is not expected to be significant (i.e., less than 3dB). Noise levels are projected to comply with the HDOH maximum permissible noise limit for Class C agricultural/industrial zoned land at all property lines. Therefore, the Proposed Action is anticipated to have a less than significant, long-term, direct adverse impact on noise levels.

The Proposed Action would have no short- or long-term, direct or indirect impact on ground-borne vibration.

No additional mitigation measures are recommended or necessary.

**Table 3-26 Noise Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Noise Levels	<	0	<	+	none	+	+
Ground-borne vibration	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.



## 3.7 Biological Resources

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on biological resources.

### 3.7.1 Methodology

Reginald David and Eric Guinther conducted botanical, avian, and terrestrial mammalian surveys of the Project Site. The purpose of the surveys is to determine if there are biological species within or adjacent to the study area that are currently listed, or proposed for listing, under the Federal or State of Hawaii endangered species statutes. David and Guinther completed the following tasks in their assessment of biological resources:

- Review of previous biological surveys conducted at or in the vicinity of the Project Site, including three faunal surveys conducted by David in 2004, 2007, and 2008 and three botanical surveys conducted by Guinther in 1992, 2003, and 2007.
- Conduct fieldwork on May 22 and 23, 2018:
  - Botanical Survey: Record the species and abundance of flora at the Project Site. Entailed a pedestrian transect that traversed the property in a series of broad loops. A handheld GSS unit (Trimble, GeoXH 600 series) was used to record the progress tracking and mark locations of special interest (e.g., location of rare native plants). Plant species were identified as they were encountered or photographed for later identification.
  - Avian Survey: Count individual birds observed at the Project Site. Ten count stations were sited roughly 300 meters apart from each other within the Project Site. A single eight-minute avian point count was made at each station. Field observations were made with the aid of Leica 8 x 42 binoculars and by listening for vocalizations. The point counts were conducted between 7:45 and 10:30 AM, the period when birds are most active and vocal.
  - Mammalian Survey: Count individual terrestrial mammals observed at the Project Site. Entailed visual and auditory detection, coupled with visual observation of scat, tracks, and other animal signs. A running tally was kept of all terrestrial vertebrate mammalian species detected during the time spent on the site.
- Determine if any species observed in the fieldwork are listed as threatened or endangered in the U.S. Fish and Wildlife Services' (USFWS) *Endangered Species List* (2017) or the State's *Indigenous Wildlife, Endangered and Threatened Wildlife and Plants, and Introduced Wild Birds* (DLNR 2015).

- Species that are federally listed as threatened or endangered, and areas that have been designated as “critical habitat” are protected under the Endangered Species Act of 1973, as amended. Threatened and endangered species are further protected in accordance with Hawaii State law (HRS §195D-4).

- Prepare the *Biological Surveys Conducted for the PVT-ISWMF Relocation Project* (Appendix E).

**Note:** A brush fire in March 2019 burned over 500 acres of hillside in the Lualualei and Nanakuli valleys, which included nearly the entire Project Site (see inset photo). The *Biological Surveys* (David and Guinther 2018) were completed prior to this fire and therefore likely overestimate the current number and diversity of flora and fauna species found at the Project Site.



*Project Site after the March 2019 brush fire.*

### 3.7.2 Existing Conditions

#### 3.7.2.1 Botanical Survey

The vegetation on the Project Site was mostly dry shrubland (i.e., grassland invaded by several species of shrubs). Grassland (former pastureland) covers much of the valley bottom along Lualualei Naval Road. Kiawe trees are widely scattered across the property.

The dominant factor affecting Project Site vegetation is wild fire. Drier areas on Oahu are subjected to fires with some regularity. Buffelgrass and Guinea grass dominate these areas. These grasses are self-preserving, as they increase the intensity of fires that occur and quickly regrow from basal stems when rains return. Over time, shrubs take root and invade the grasslands. Most Native Hawaiian plants are not adapted to fire and are gradually eliminated from areas subjected to repeated burns. The progression of the Project Site from grasslands to shrubland to land scorched by wildfire is documented in the 1992, 2003, 2007, and 2018 botanical surveys conducted by Guinther and recent photos taken in March 2019.

In the most recent 2018 survey, a total of 48 plant species were recorded, a rather small number for a 179-acre parcel. Of the 48 species, five (10%) are indigenous species (i.e., native to Hawaii but not unique to the Hawaiian Islands) and one (2%) is an endemic species (i.e., native to Hawaii and found naturally nowhere else). The remaining plant species are exotics introduced to the Hawaiian Islands after western contact and are well-established outside of cultivation. No plant species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes were recorded during the survey. Appendix E, Table 1 provides the full listing of plants observed at the Project Site.

The ratio of native plants to non-native plants (as a% of the total number of species recorded) was 12%, which is typical for lowland areas on Oahu. The occurrence of the natives in the survey area was recorded as “Occasional” (seen with some regularity) or “Uncommon” (seen at most in several locations).

The only endemic species observed at the Project Site was the mao or Hawaiian cotton plant (*Gossypium tomentosum*). Hawaiian cotton is no longer widespread on Oahu and can be found primarily in arid, rocky, or clay coastal plains, up to 400 feet in elevation. Hawaiian cotton populations also occur on protected lands such as the Kaena Natural Area Reserve and the State-owned Queen's Beach. Some of the largest populations are found on Lanai and Kahoolawe. The species is also available commercially from several plant nurseries and is widely used in landscaping. Hawaiian cotton is not a federally listed threatened or endangered species.

### **3.7.2.2 Avian Survey**

A total of 233 individual birds of 19 species, representing 13 separate families, were recorded during the survey. All 19 species detected at the Project Site are alien to the Hawaiian Islands (see Appendix E, Table 2). No avian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes were recorded.

Avian diversity and densities were low, which is in keeping with the location and the minimal vegetation present on the Project Site. Three introduced species accounted for 50% of the total number of birds recorded:

- Scaly-breasted Munia (*Lonchura punctulata*). Most commonly tallied species and accounted for 48% of the birds recorded.
- Red-vented Bulbul (*Pycnonotus cafer*).
- House Finch (*Haemorhous mexicanus*).

No seabirds or owls were recorded during the survey.

The findings of this latest avian survey are consistent with the current habitat present on the Project Site and with the three other faunal surveys conducted by David in 2004, 2007, and 2008. The bird species recorded on the four surveys are almost identical, although densities have changed over time periodically favoring one species over another depending on the amount and type of grass seed present across the site.

### **3.7.2.3 Mammalian Survey**

No mammalian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes were recorded. Four terrestrial mammalian species were detected at the Project Site, all of which are alien species. Three dogs (*Canis familiaris*), several small Indian Mongooses (*Herpestes auropunctatus*), and one cat (*Felis catus*) was observed. Signs

of goat (*Capra hircus*) browsing on bark was also seen on a clump of koa haole (*Leucaena leucocephala*) located near the highest point on the Project Site. No bats were observed.

The findings of the mammalian survey are consistent with the current habitat present on the Project Site and with the three other faunal surveys conducted on the property by David in 2004, 2007, and 2008.

#### **3.7.2.4 Critical and Sensitive Habitats**

A Critical Habitat is defined by the USFWS as a “specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery” (USFWS 2019).

No part of the Project Site is included in a Federally designated Critical Habitat Unit (Figure 3-24). There is no equivalent statute under Hawaii State law.

### **3.7.3 Impacts**

#### **3.7.3.1 Proposed Action**

##### **Botanical Species**

Based on the findings of the Botanical Survey, the Proposed Action is not anticipated to have short- or long-term, direct or indirect impacts on plant species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes.

Only one plant species was observed during the survey that is included on the State of Hawaii Species of Greatest Conservation Need: mao or Hawaiian cotton (*Gossypium tomentosum*). Mao is an endemic shrub but is not a listed species. The species was not found in abundance at the Project Site.

##### **Avian Species**

Based on the findings of the Botanical Survey, the Proposed Action is not anticipated to have short- or long-term, direct or indirect impacts on avian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes.

Although the endemic Short-eared Owl (*Asio flammeus sandwichensis*) was not recorded during this survey, the State-listed species has been recorded within the greater Lualualei area. Short-eared Owls are a ground nesting, diurnal species. The sheer number and densities of mammalian predators on Oahu make it very difficult for this species to successfully nest except within protected areas that have a strong mammalian predator control program in place. It is possible but improbable that if the grass on the Project Site were to regrow after the fire and remain short

that the habitat could be used for Short-eared Owls nesting. A qualified biologist will conduct a nesting Short-eared Owl survey of the Project Site immediately prior to clearing and grading.

Although no seabirds were detected during the survey, several seabird species potentially fly over the Project Site on occasion. Two seabird species, Wedge-tailed Shearwater (*Puffinus pacificus*) and Newell's Shearwater (*Puffinus auricularis newelli*), have been downed on Oahu due to light attraction during the annual seabird fledging season. Nocturnally flying seabirds, especially fledglings, can become disoriented by exterior lighting. When disoriented, seabirds often collide with manmade structures, and if they are not killed outright, the dazed or injured birds are easy targets for feral mammals. The Proposed Action would only operate during daytime hours and no nighttime construction is anticipated. However, if night lighting is required, PVT would shield all lights and/or place lights high enough to be pointed directly at the ground to minimize impacts to nocturnally flying seabirds.

### **Mammalian Species**

Based on the findings of the mammalian survey, the Proposed Action is not anticipated to have short- or long-term, direct or indirect impacts on mammalian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes.

No Hawaiian hoary bats were detected during this survey. It is only in recent years that this species is being recorded on a regular basis on Oahu. It is possible this species may use resources within the Project Site on a seasonal basis, however there are no trees suitable for roosting bats.

### **Critical and Sensitive Habitats**

There is no Federally-delineated Critical Habitat present within the vicinity of the Project Site. Therefore, the Proposed Action would not result in short- or long-term, direct or indirect impacts to Federally-designated Critical Habitat.

#### **3.7.3.2 No Action Alternative**

The No Action Alternative would have no short- or long-term, direct or indirect impacts on biological resources. The PVT ISWMF would continue to operate until closure and the Project Site would remain undeveloped until another suitable use was determined.

#### **3.7.4 Summary of Impacts and Potential Mitigation**

Neither the Proposed Action or the No Action Alternative would have short- or long-term, direct or indirect impacts on biological resources.

Although it is improbable that the Project Site habitat could be used for Short-eared Owls nesting, a qualified biologist will conduct a nesting Short-eared Owl survey of the Project Site immediately prior to clearing and grading.

**Table 3-27 Biological Resources Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Botanical Species	0	0	0	0	none	0	0
Avian Species	0	0	0	0	none	0	0
Mammalian Species	0	0	0	0	none	0	0
Federally Designated "Critical Habitat"	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

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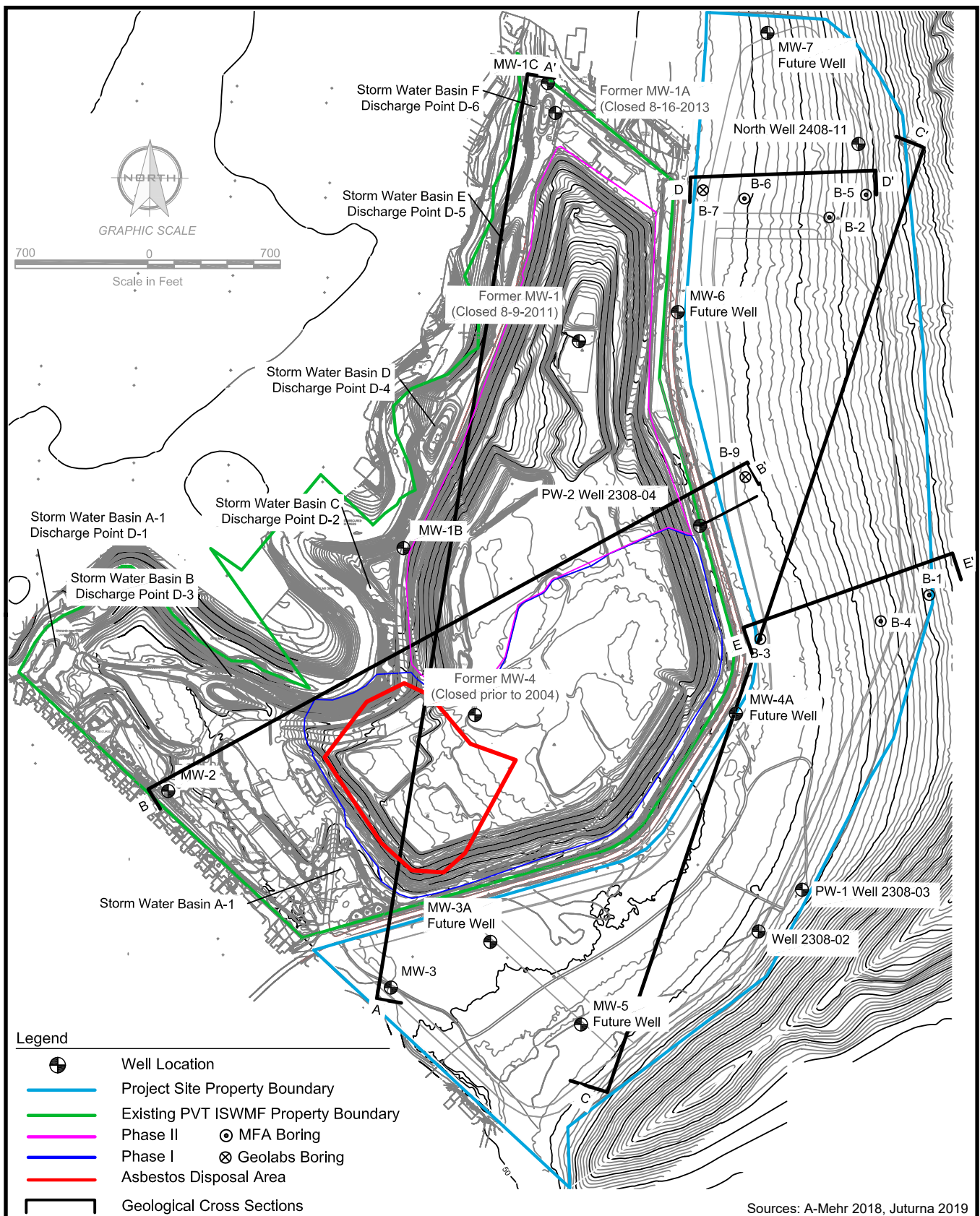


Figure  
**3-1**





Figure  
**3-2**

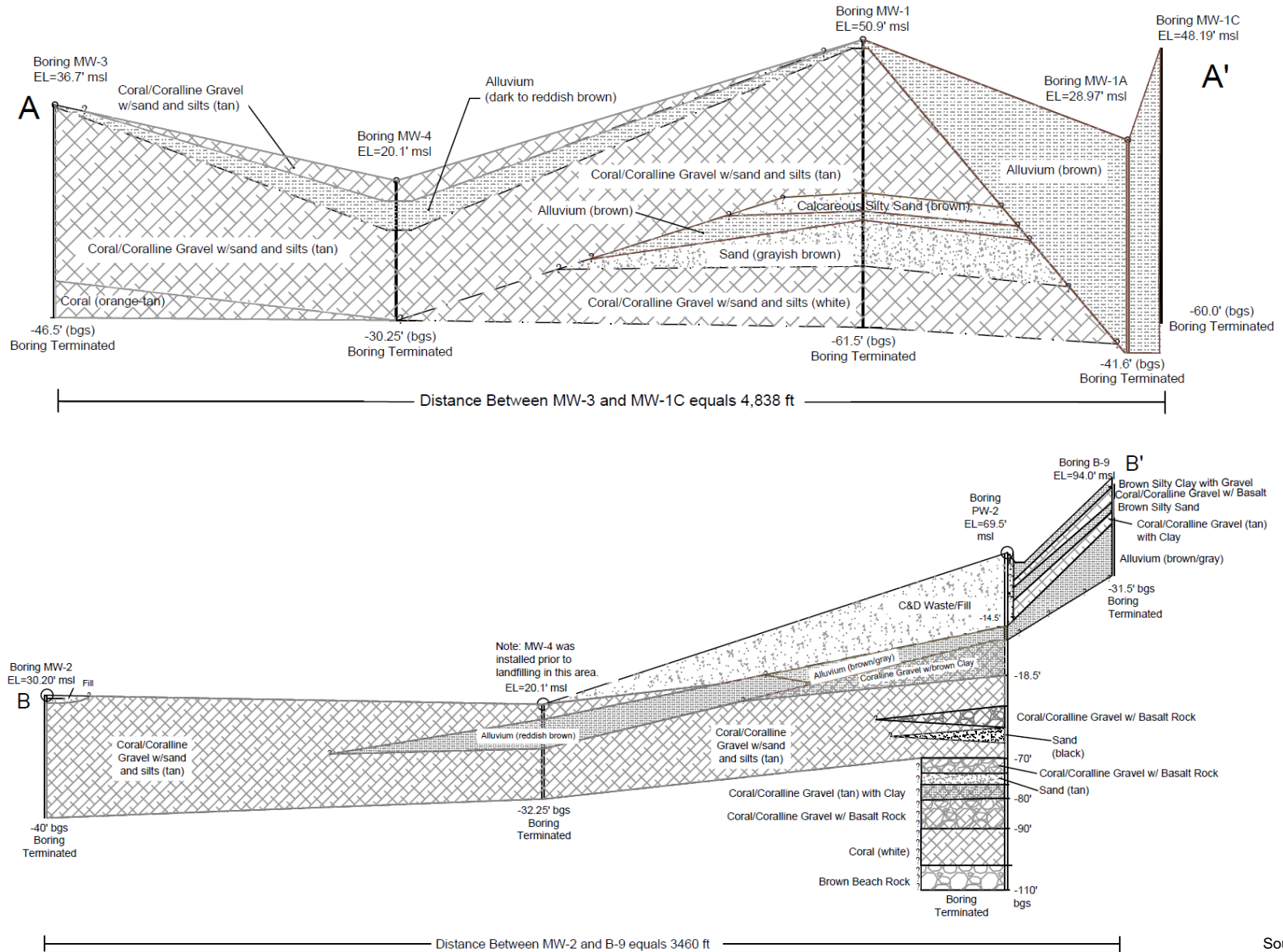


**Geologic Cross Section and Wells (Existing/Future)**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-3**

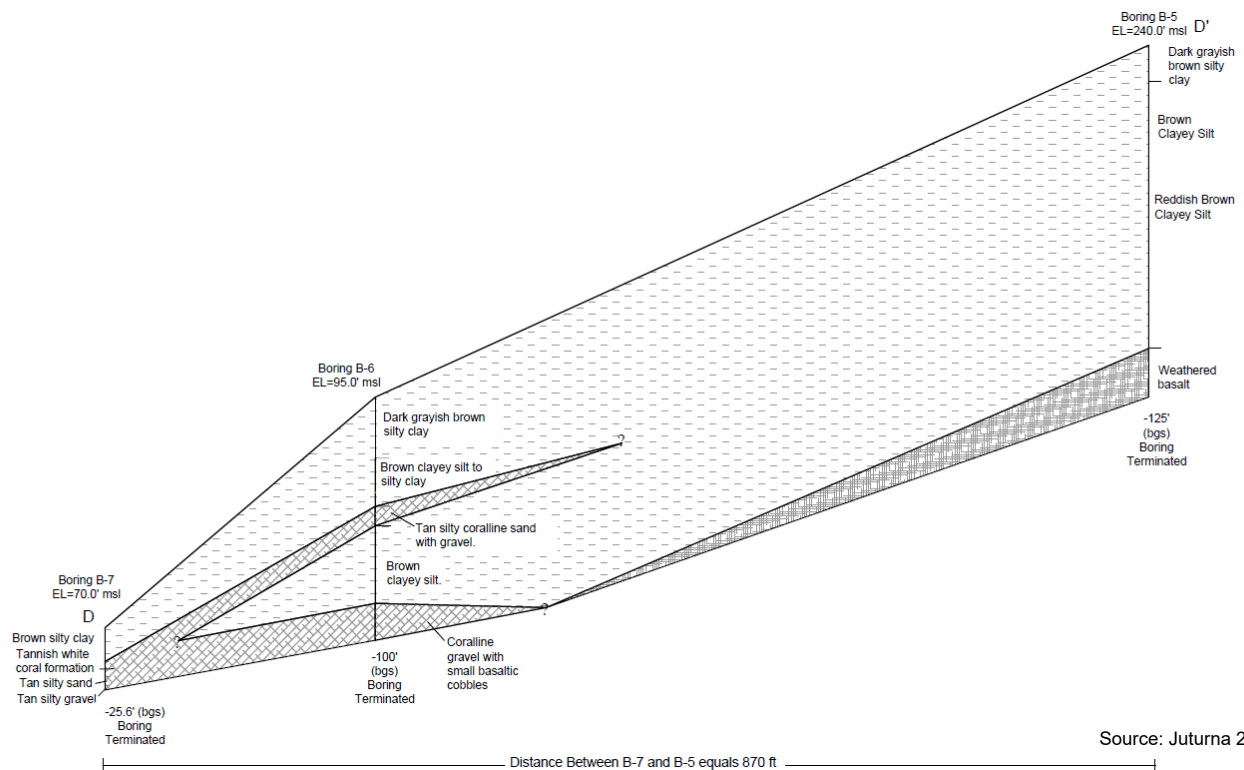
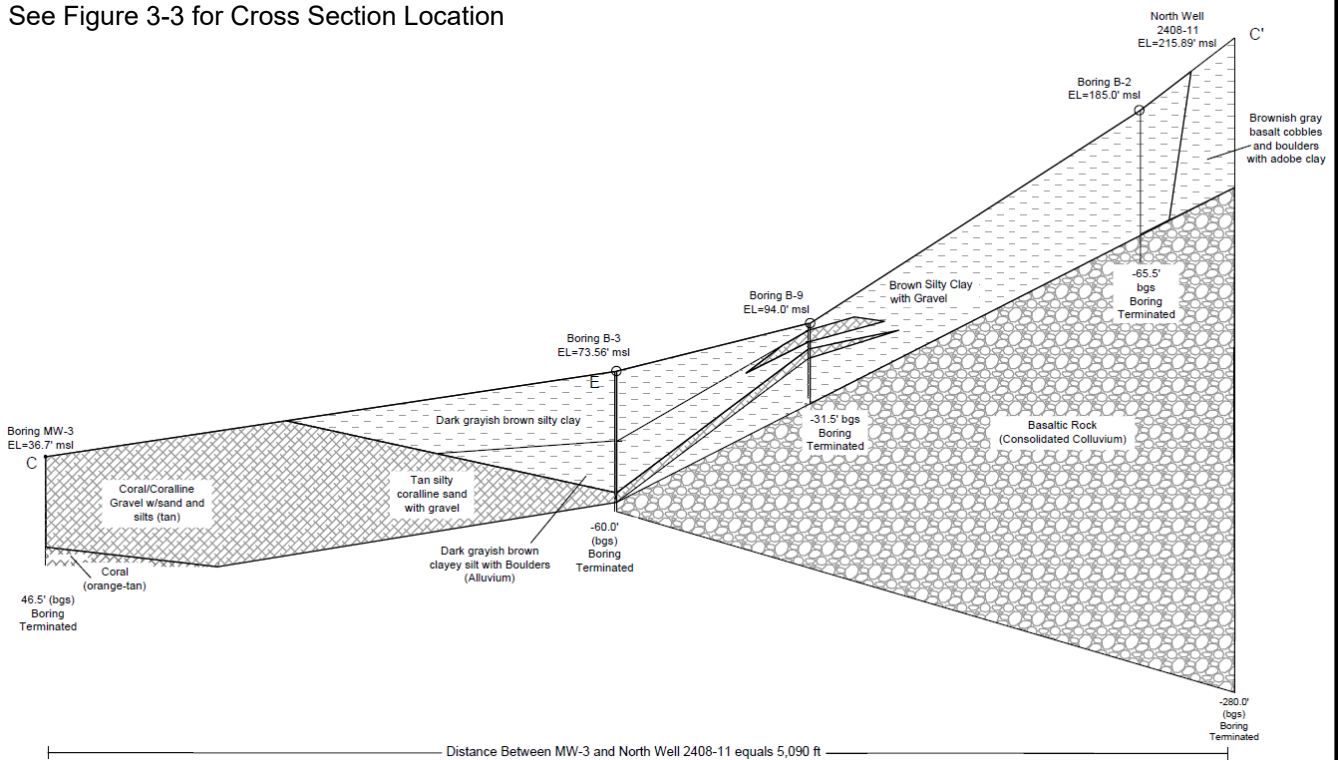


See Figure 3-3 for Cross Section Location



**Geologic Cross Sections A-A' and B-B'**  
 PVT ISWMF Relocation  
 Nanakuli, Waianae District, Oahu, Hawaii

See Figure 3-3 for Cross Section Location

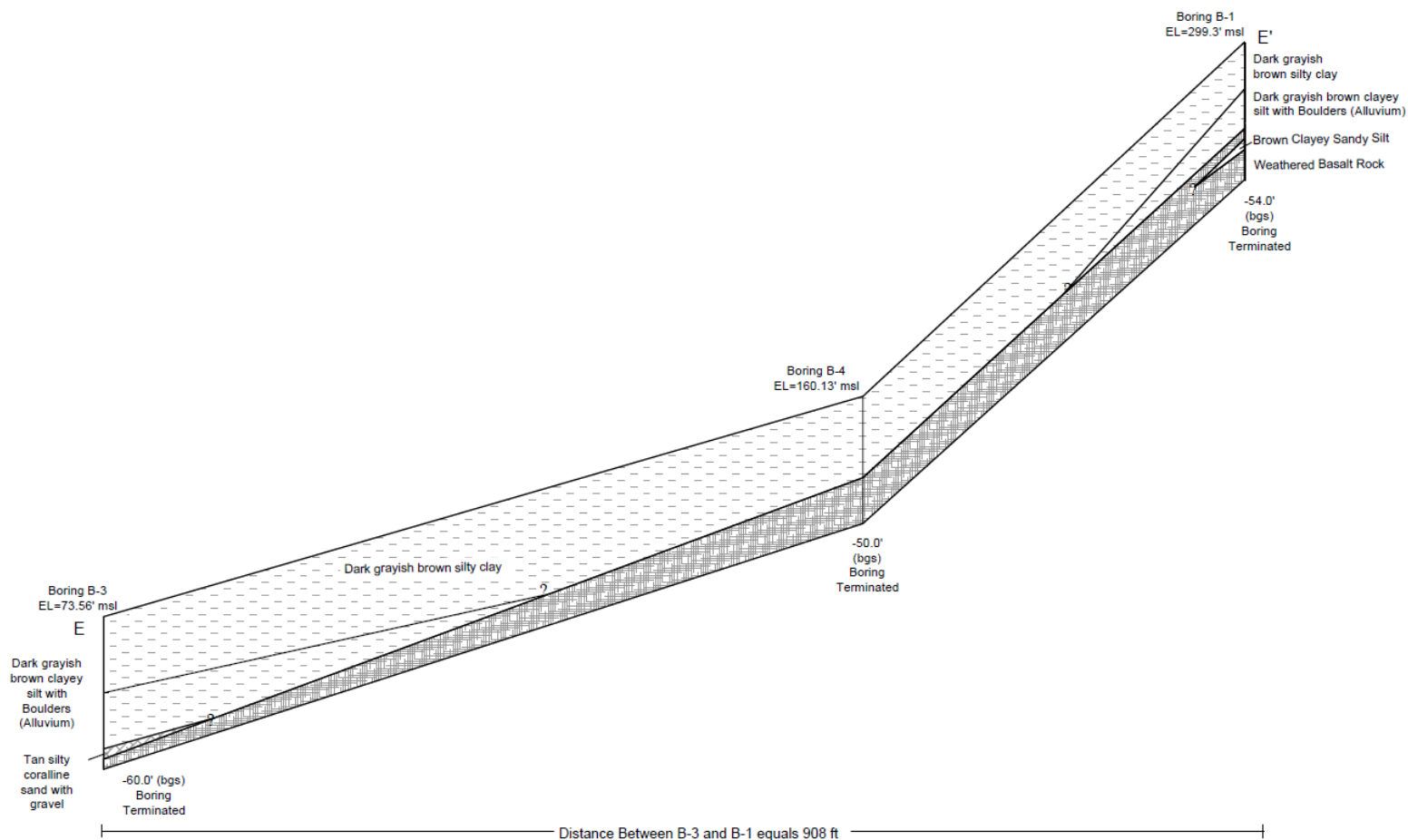


Source: Juturna 2019

**Geologic Cross Sections C-C' and D-D'**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-5**

See Figure 3-3 for Cross Section Location

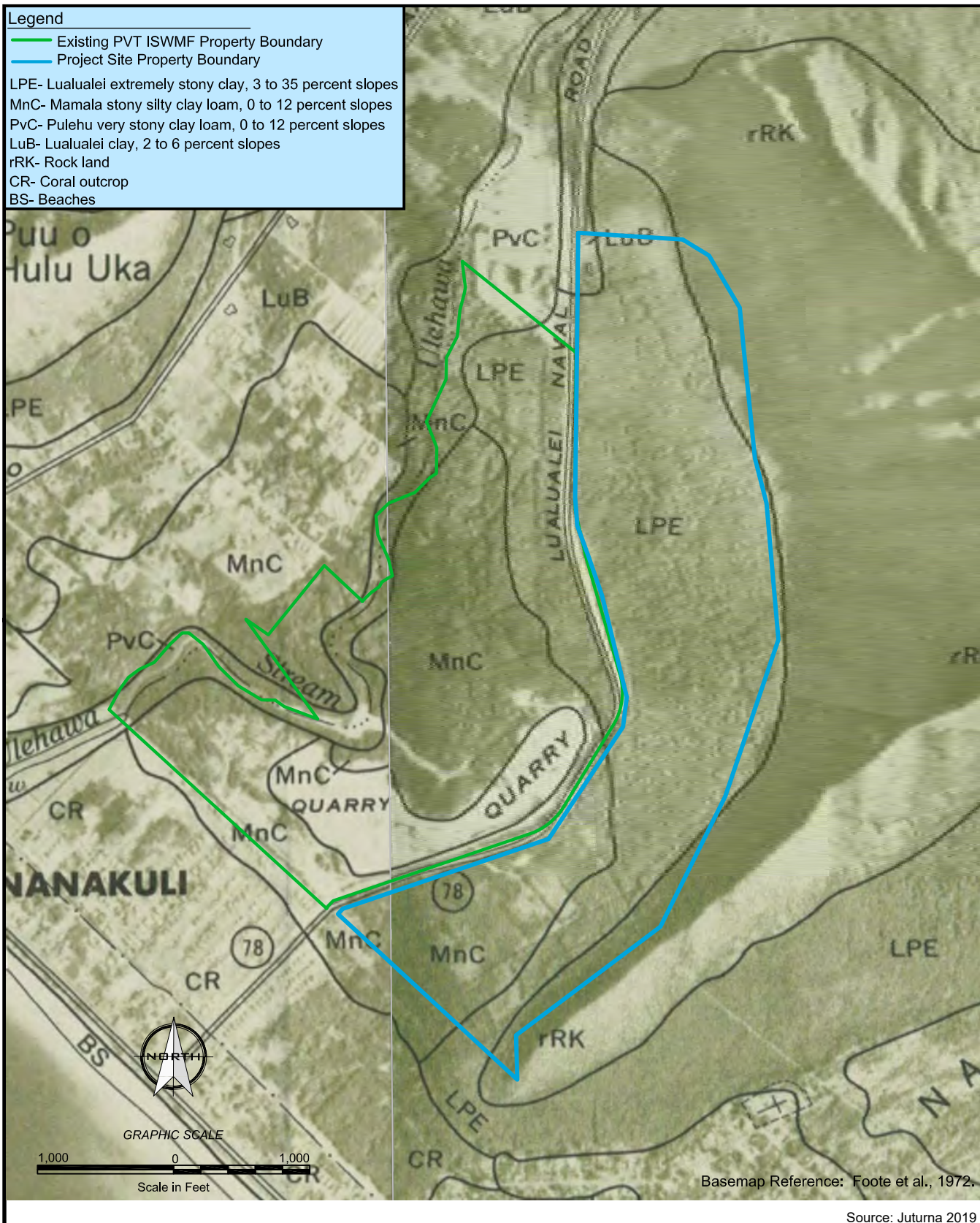


Source: Juturna 2019

**Geologic Cross Section E-E'**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-6**

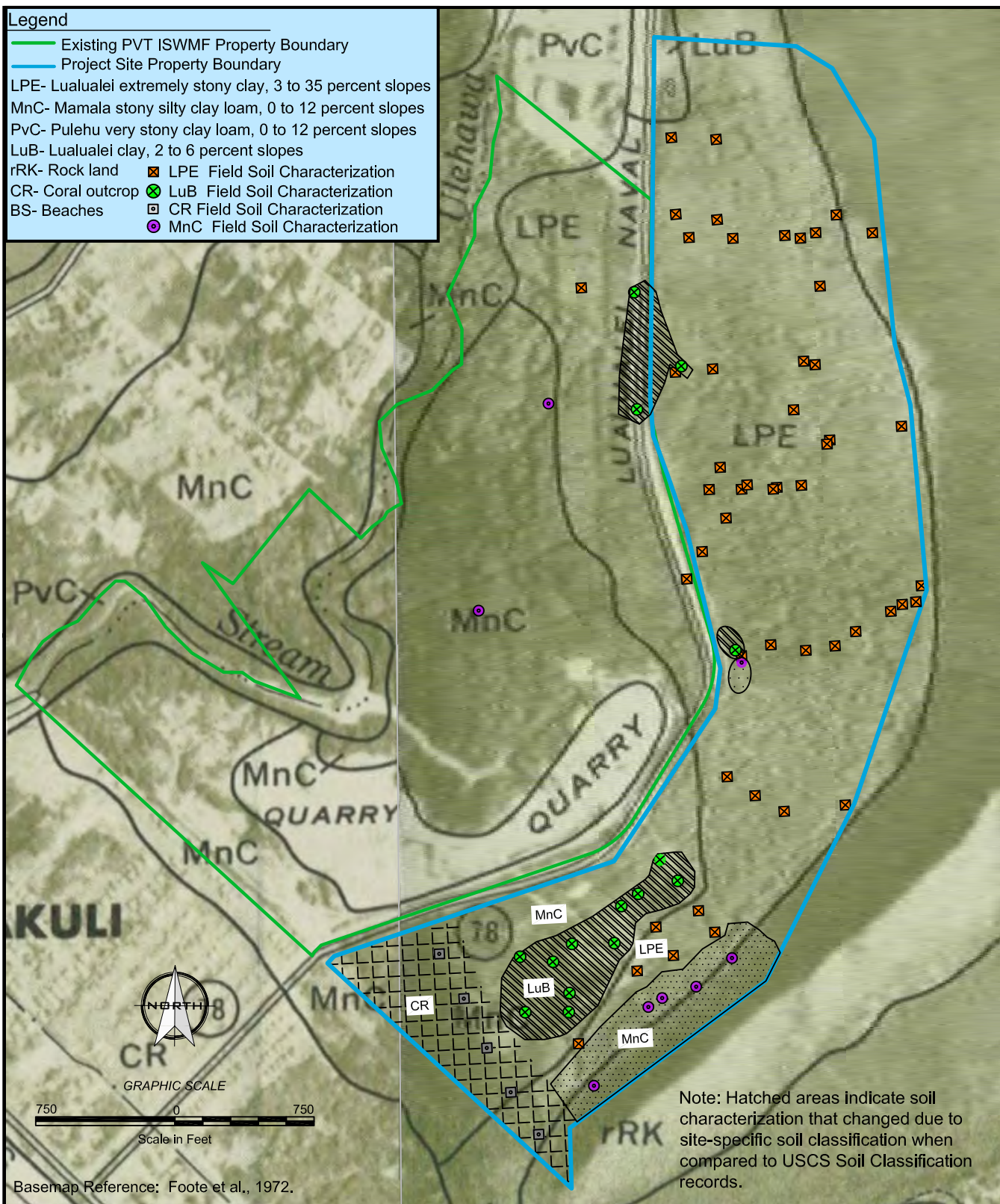




**USDA SCS Soil Map**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

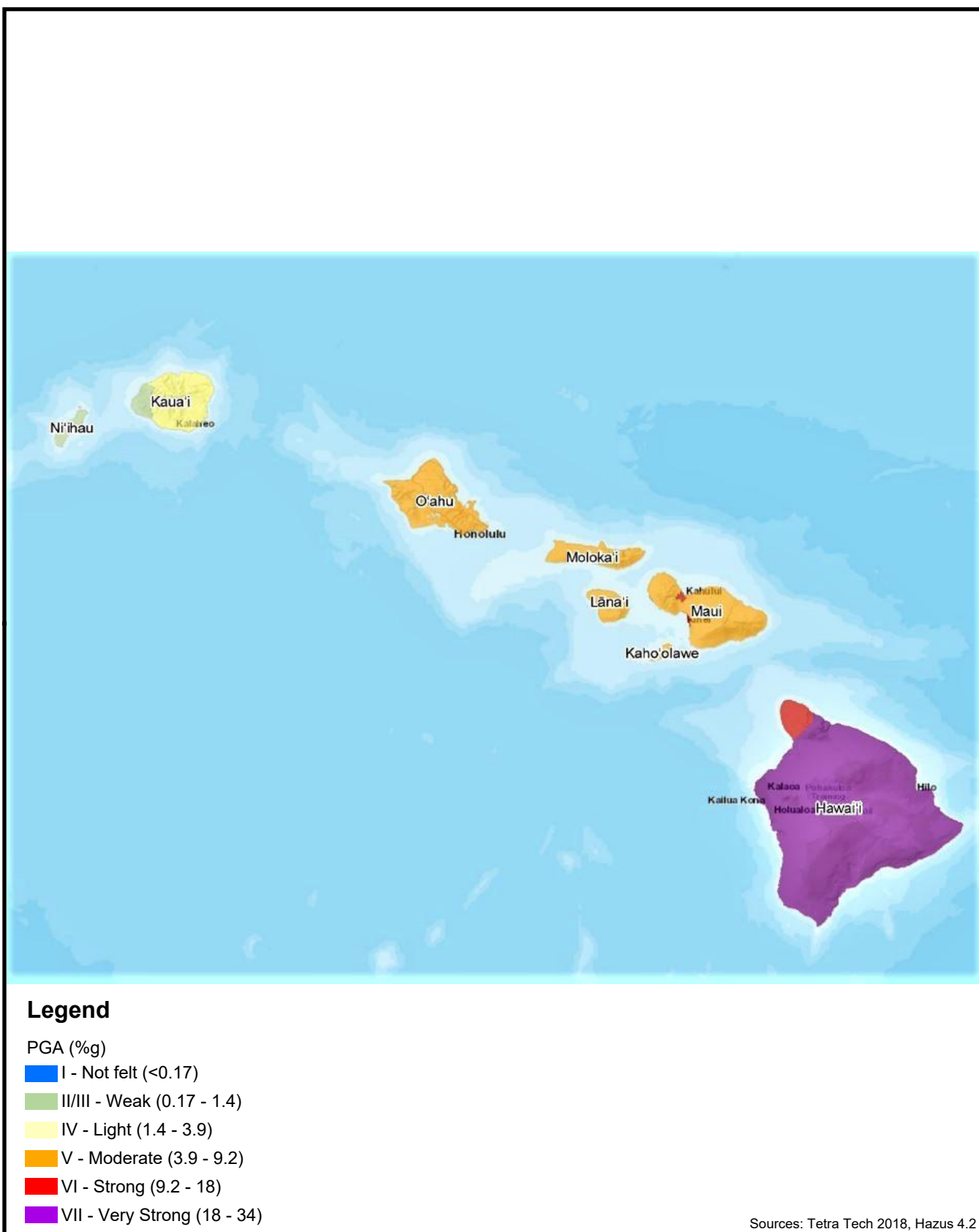
Figure  
**3-7**





**Updated Soil Map**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-8**



**Earthquake Hazards**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-9**



## Legend


 Project Site [TMK: (8)7:009-007]


 PVT ISWMF


## Flood Zone

 Zone A: No Base Flood Elevation (BFE) determined.


 Zone AE: BFE


 Zone AH: Flood depths of 1 to 3 feet (usually area of ponding); BFE determined.


 Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.

 Zone D: Unstudied areas where flood hazards are undertermined.

 Open Water

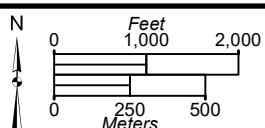
 Zone V: Coastal flood zone with velocity hazard (wave action); no BFE determined.

 Zone VE: Coastal flood zone with velocity hazard (wave action); BFE determined.

 Zone X: Areas determined to be outside the 1% annual chance floodplain.

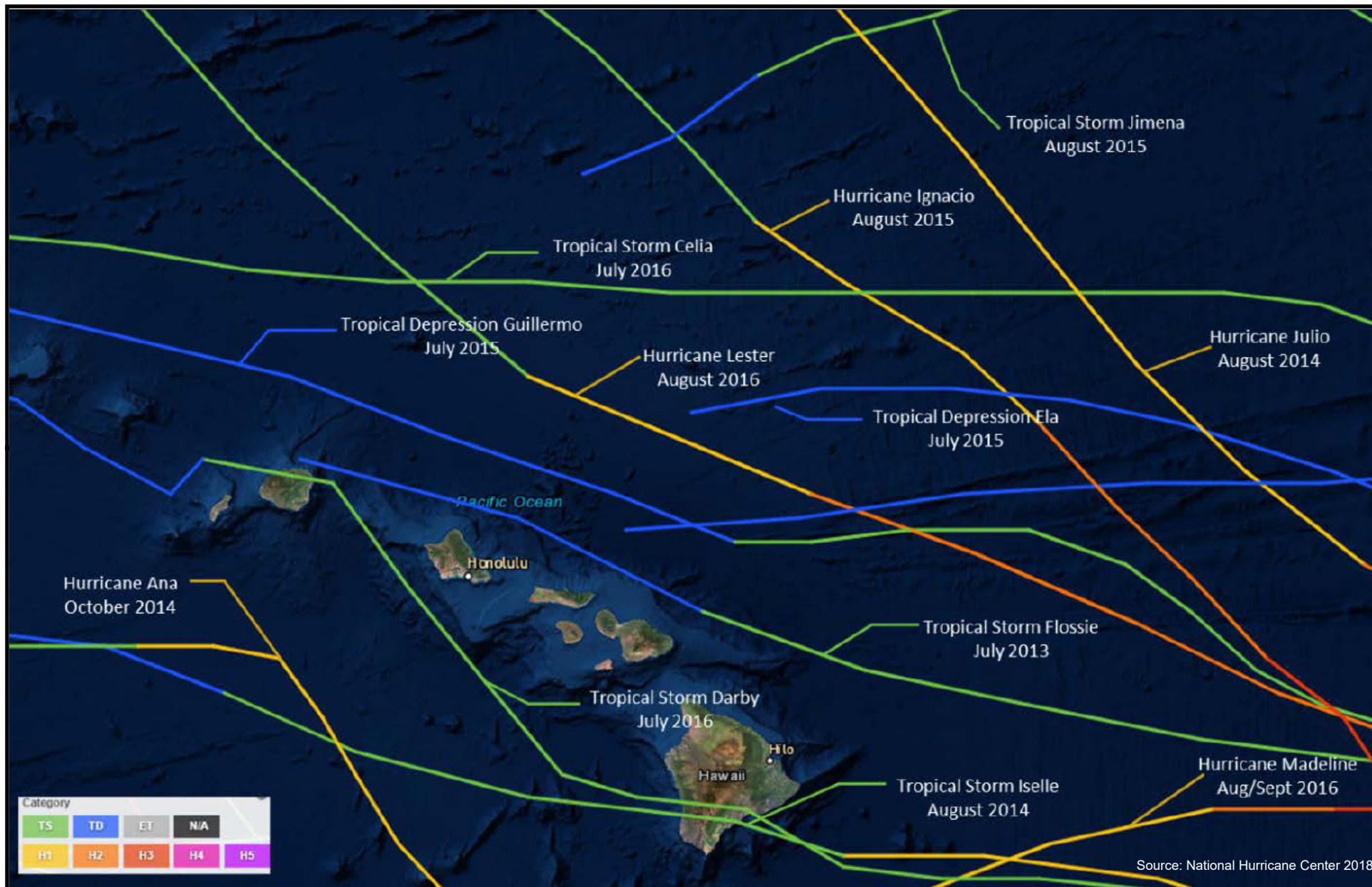
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Source: geodata.hawaii.gov 2018



**Flood Hazard Areas**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-10**



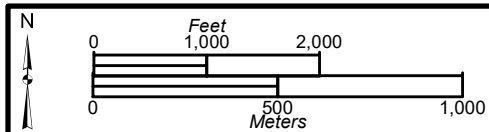
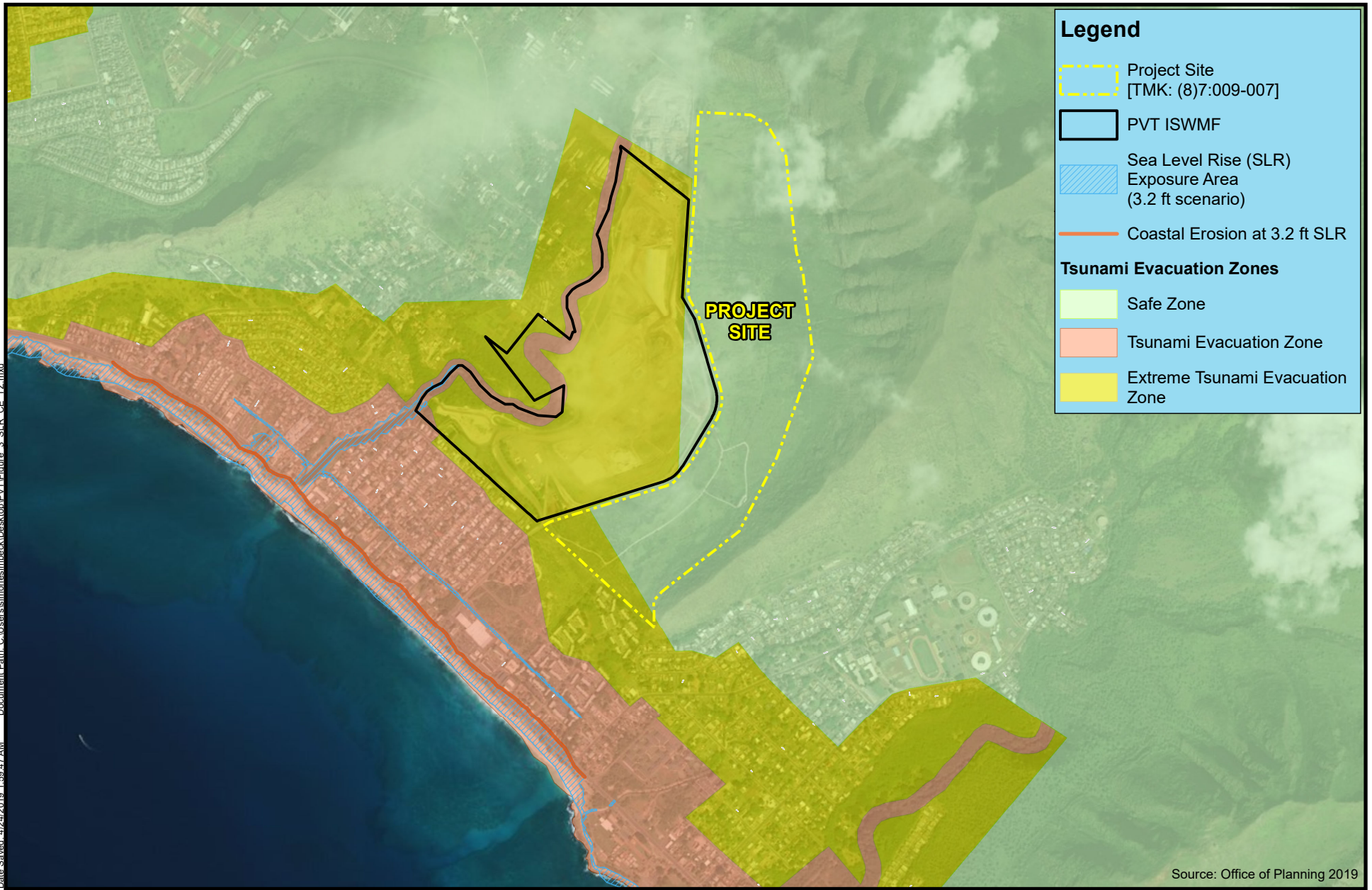
## Historical Tropical Storm and Hurricane Tracks, 2002 to 2016

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
3-11

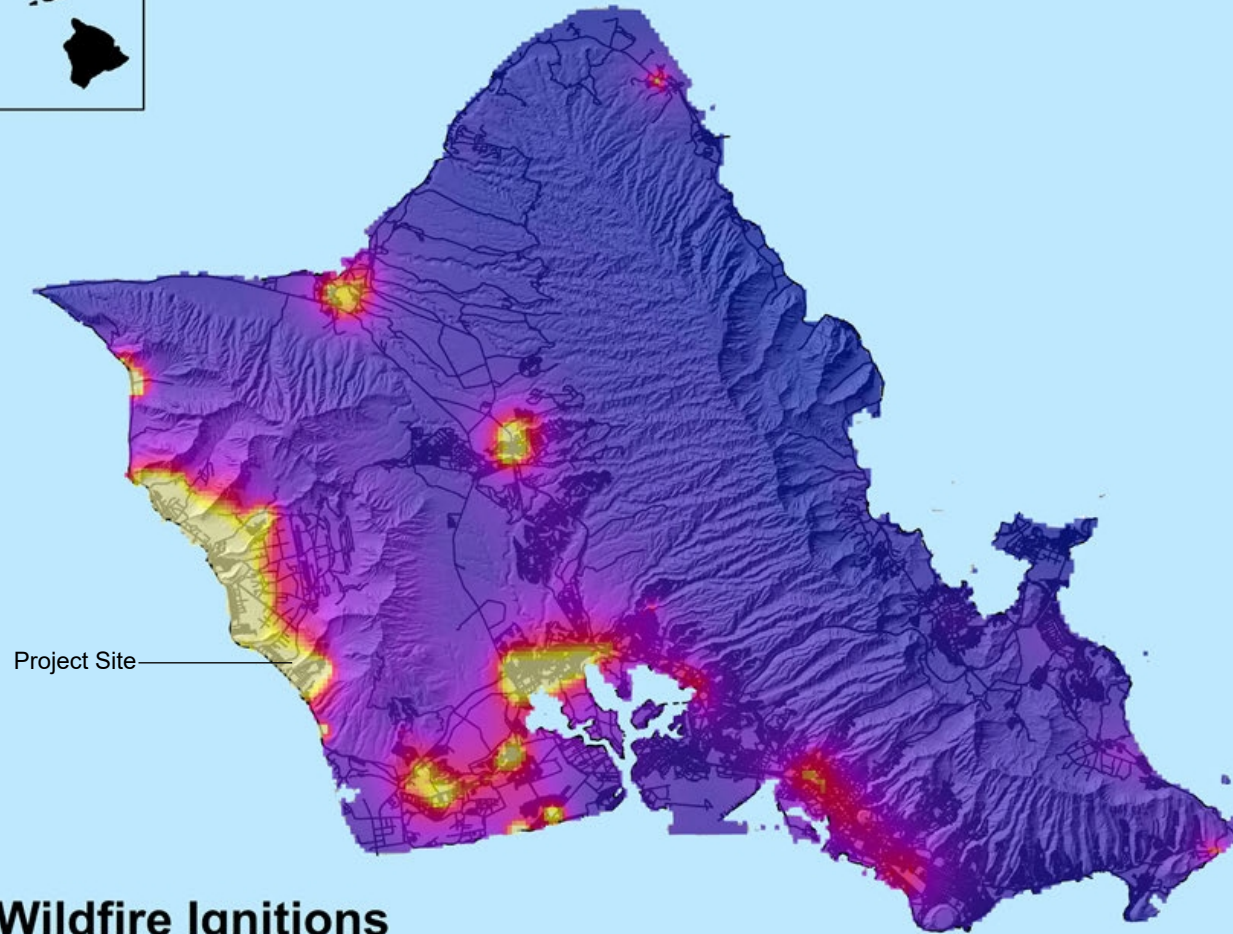
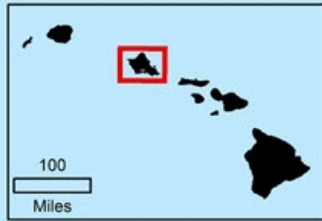


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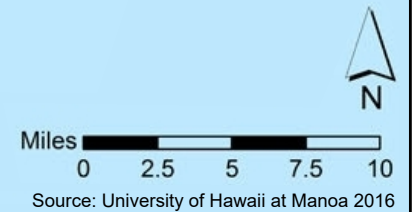
**Sea Level Rise, Coastal Erosion, and Tsunami Zones**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

**Figure**  
**3-12**



## Oahu Wildfire Ignitions

Per Square Mi. Per Yr. — Roads



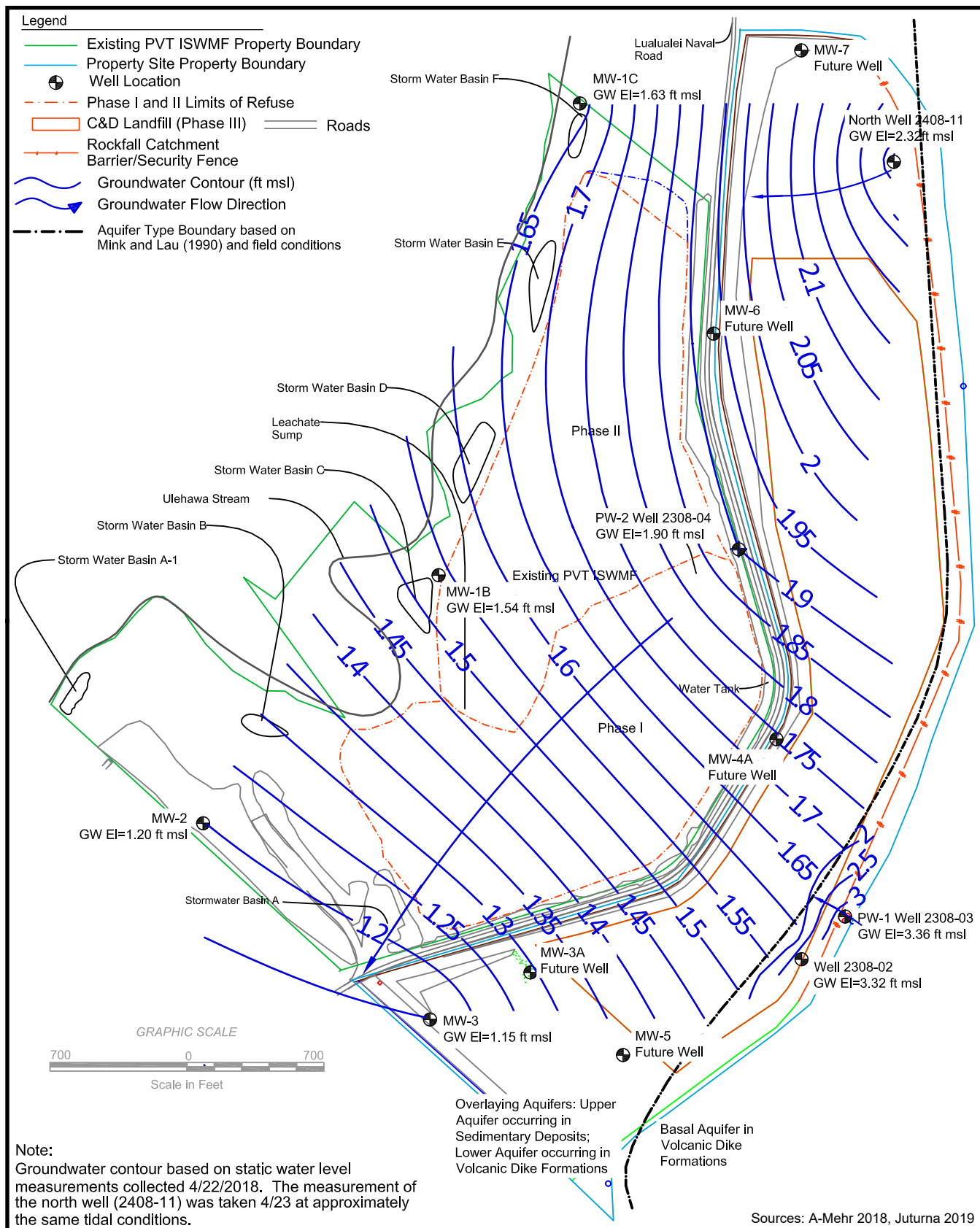
Source: University of Hawaii at Manoa 2016

**Oahu Wildfire Ignitions**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-13**

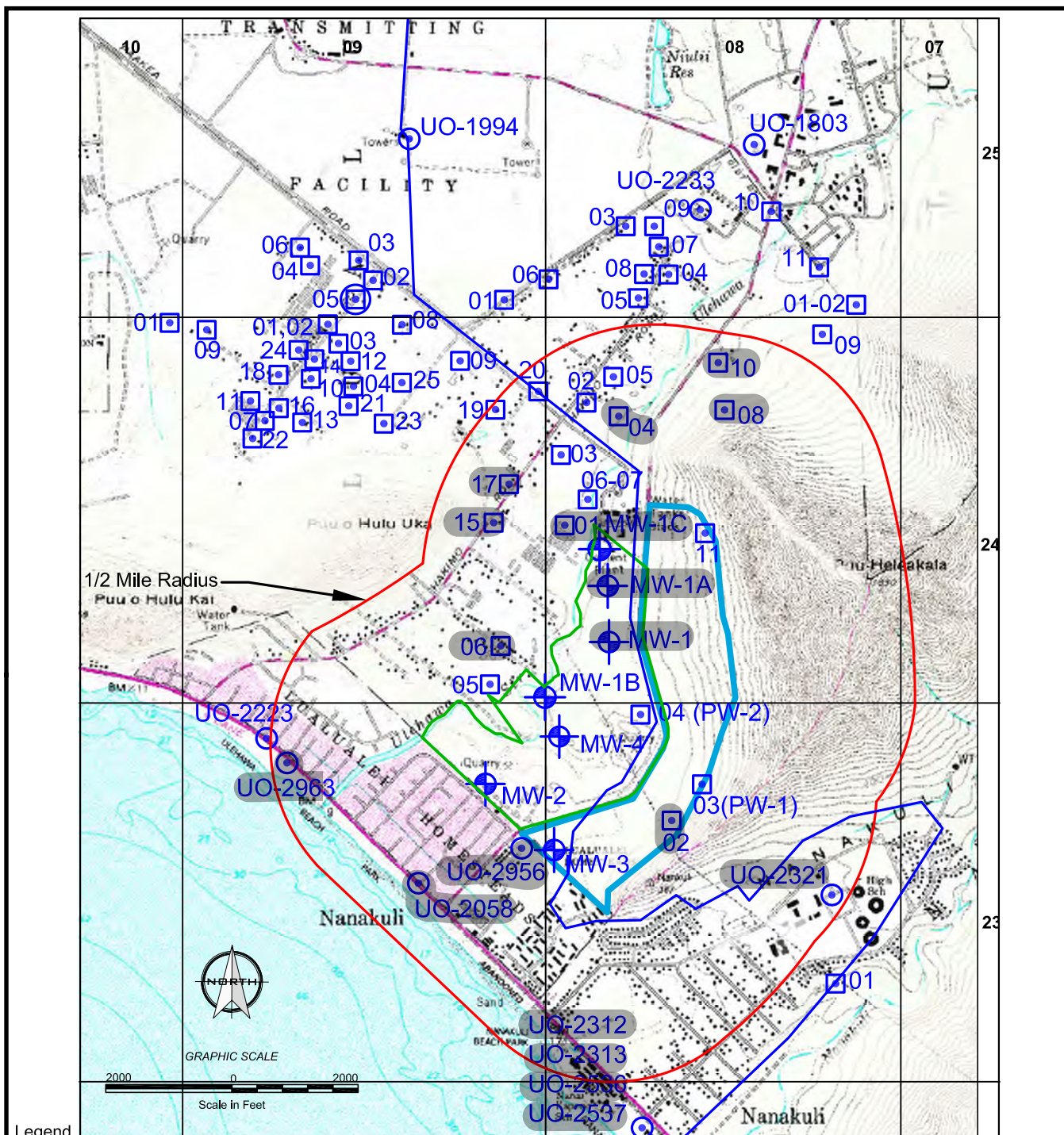






	<p><b>Groundwater Gradient</b></p> <p>PVT ISWMF Relocation</p> <p>Nanakuli, Waianae District, Oahu, Hawaii</p>	<p>Figure</p> <p><b>3-15</b></p>
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Legend

- 1/2 Mile Radius from PVT ISWMF
- Existing PVT ISWMF Property Boundary
- Project Site Property Boundary
- Other Well
- Injection Well
- UIC Line
- + PVT Monitoring Wells
- Potable Well
- Well registered within 1/2 mile but not used

Sources: HDOH 1984, Deloreme 1985, Juturna 2019

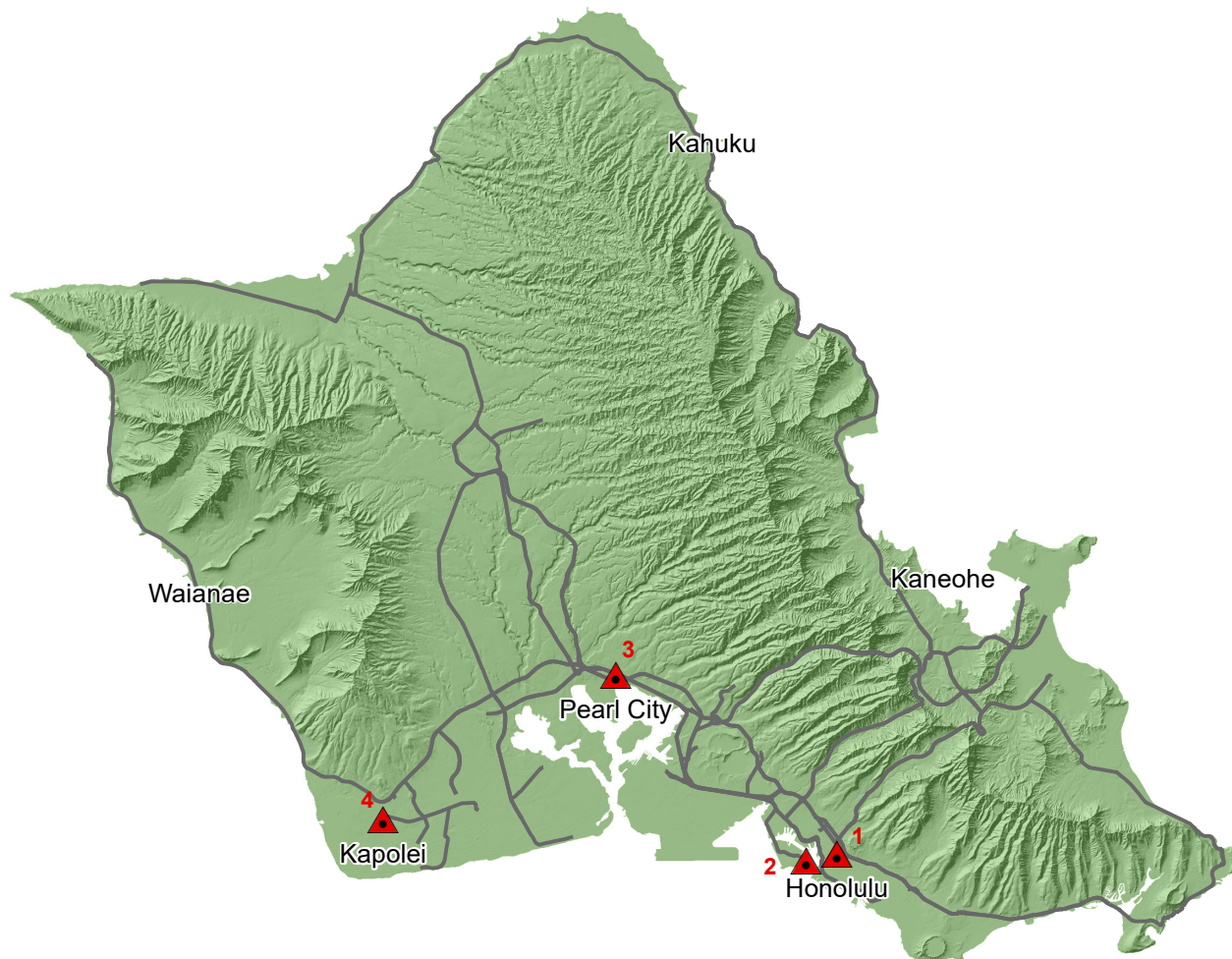
## Well Locations and Underground Injection Control Line

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure

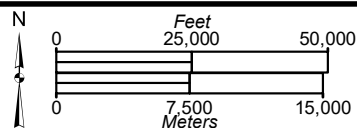
**3-16**





Station	Name	Location	Pollutants/Parameters Monitored
1	Honolulu	1250 Punchbowl St.	CO, SO <sub>2</sub> , PM <sub>2.5</sub> , PM <sub>10</sub>
2	Sand Island	1039 Sand Island Pkwy.	O <sub>3</sub> , PM <sub>2.5</sub>
3	Pearl City	860 4th St.	PM <sub>2.5</sub> , PM <sub>10</sub>
4	Kapolei	2052 Lauwiliwili St.	CO, SO <sub>2</sub> , NO <sub>2</sub>
	Kapolei NCore	2052 Lauwiliwili St.	CO trace, SO <sub>2</sub> trace, NO/NO <sub>y</sub> , Pb, O <sub>3</sub> , PM <sub>2.5</sub> , PM <sub>2.5</sub> speciation, PM <sub>10</sub> , PM <sub>10-2.5</sub> , WS/WD

Source: DPP 2017



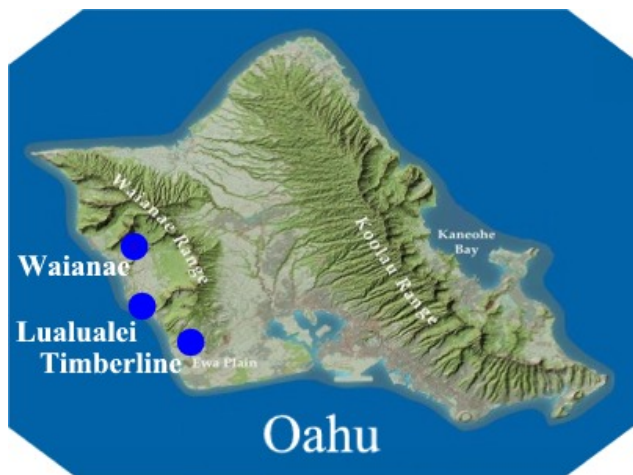
**HDOH Oahu Air Monitoring Stations**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-17**



Hawaiian  
Electric

## West Oahu Air Quality Monitoring Program

[Home](#)
[Waianae](#)
[Lualualei](#)
[Timberline](#)
[Past Data](#)
[About AQI](#)
[Glossary](#)
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Aloha and welcome to the West Oahu Air Quality Monitoring website.

Hawaiian Electric Company operates a network of three ambient air quality monitoring stations located on the Waianae Coast. The monitoring stations were placed into operation in April 2009 as part of a commitment made by Hawaiian Electric to the west Oahu communities. The monitoring stations are one of six commitments made in conjunction with the development of a new power generating station at Campbell Industrial Park. More information about these commitments, also referred to as community benefits or givebacks, can be found by clicking [here](#).

Current real-time data for several air quality parameters that are measured at the stations are shown below in terms of the Air Quality Index. The data are updated hourly at about 15 minutes after the hour. More detailed information can be found on this web page by clicking the underlined text.

### PRESENT AIR QUALITY

Station	Air Quality Index						Date / Time (HST)
<a href="#">Waianae</a>	SO2	O3	CO	PM10	PM2.5	NO2	06/20/2019 11:00 to 12:00
<a href="#">Lualualei</a>	SO2	O3	CO	PM10	PM2.5	NO2	06/20/2019 11:00 to 12:00
<a href="#">Timberline</a>	SO2	O3	CO	PM10	PM2.5	NO2	06/20/2019 11:00 to 12:00

Note: Place cursor over colored boxes for explanation

### [Air Quality Index Key](#)

Good
Moderate
Unhealthy for Sensitive Groups
Unhealthy
Very Unhealthy
Hazardous
Data Not Available

### More Information

[Past 24 Hours](#)
[Past 7 Days](#)
[Past 30 Days](#)
[Special Notices](#)

**A DISCLAIMER:** The data on this web site are preliminary and await review and validation by qualified staff. The data may be revised or invalidated after review. Every effort is made to assert the validity and integrity of the real-time data displayed on this web site, but data can be affected by equipment malfunctions, technical difficulties and other unforeseen circumstances.

Source: HECO 2019

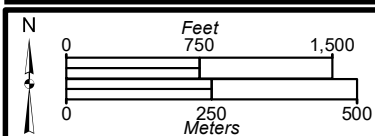
## HECO West Oahu Air Monitoring Stations

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
3-18



Date Saved: 4/25/2019 12:10:14 PM Document Path: C:\Users\matthewfong\OneDrive - Hart Crowser Inc\GIS\PVT\Figure3-26\_Air Monitoring Sites.mxd



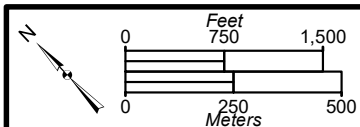
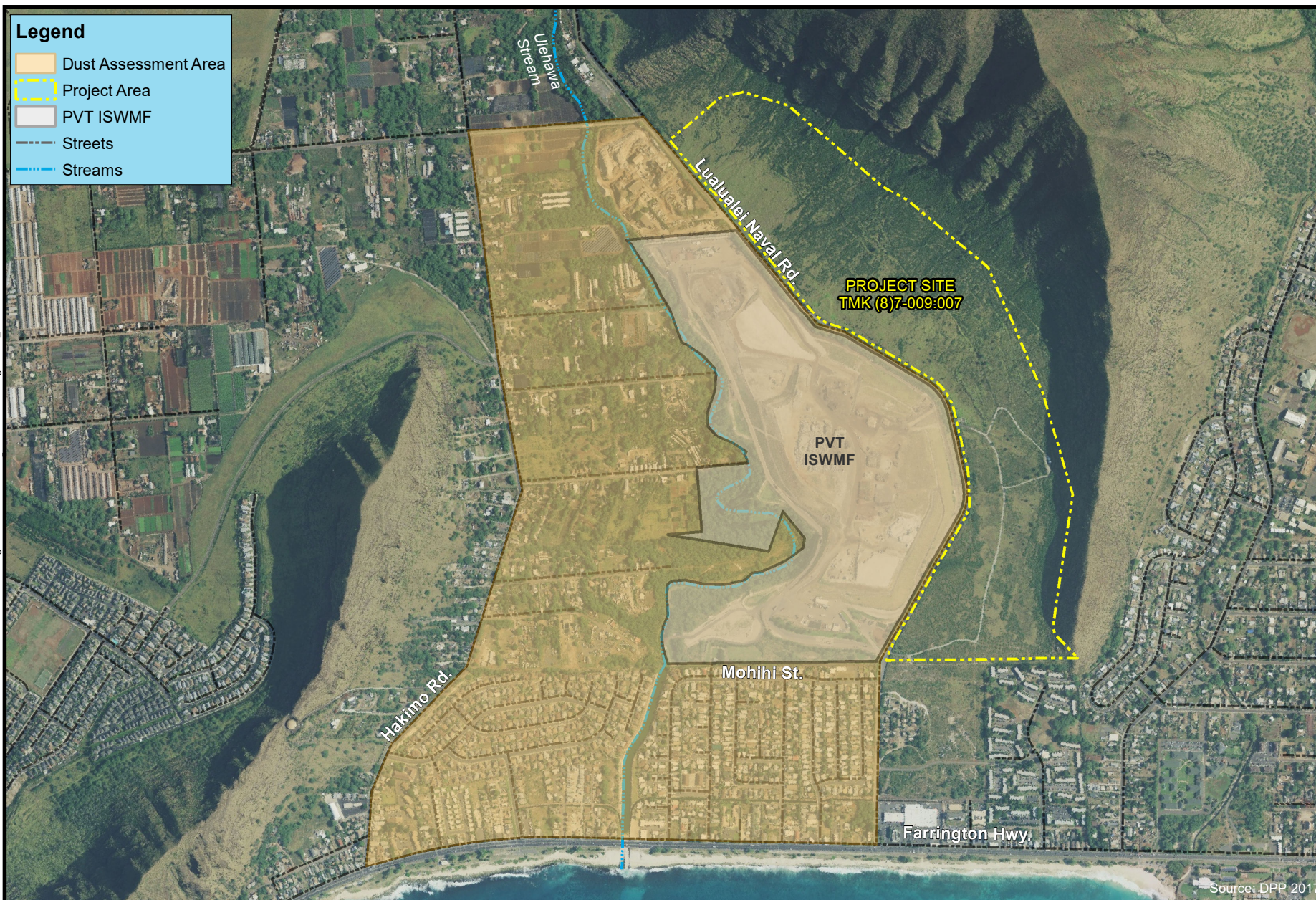
**PVT Air Monitoring Sites**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-19**

Source: Aerial photograph provided by Hexagon Imagery Program Data.



Date Saved: 4/25/2019 12:46:21 PM Document Path: C:\Users\matthewwong\OneDrive - Hart Crowser Inc\GIS\PVT\Figure3-27 HDOH Nanakuli Dust Assessment Area.mxd



**HDOH Nanakuli Dust Assessment Area**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-20**

Source: Aerial photograph provided by Hexagon Imagery Program Data.





<p>0 500 1,000 Feet</p> <p>0 100 200 Meters</p>	<p><b>Noise Measurement Locations</b></p> <p>PVT ISWMF Relocation</p> <p>Nanakuli, Waianae District, Oahu, Hawaii</p>	<p>Figure <b>3-21</b></p>
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Date Saved: 4/24/2019 5:43:17 PM Document Path: C:\Users\matthewfong\OneDrive - Hart Crowser Inc\GIS\PVT\Figure3-22\_Noise Receptors.mxd



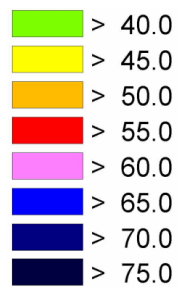
**Noise Receptor Locations**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-22**

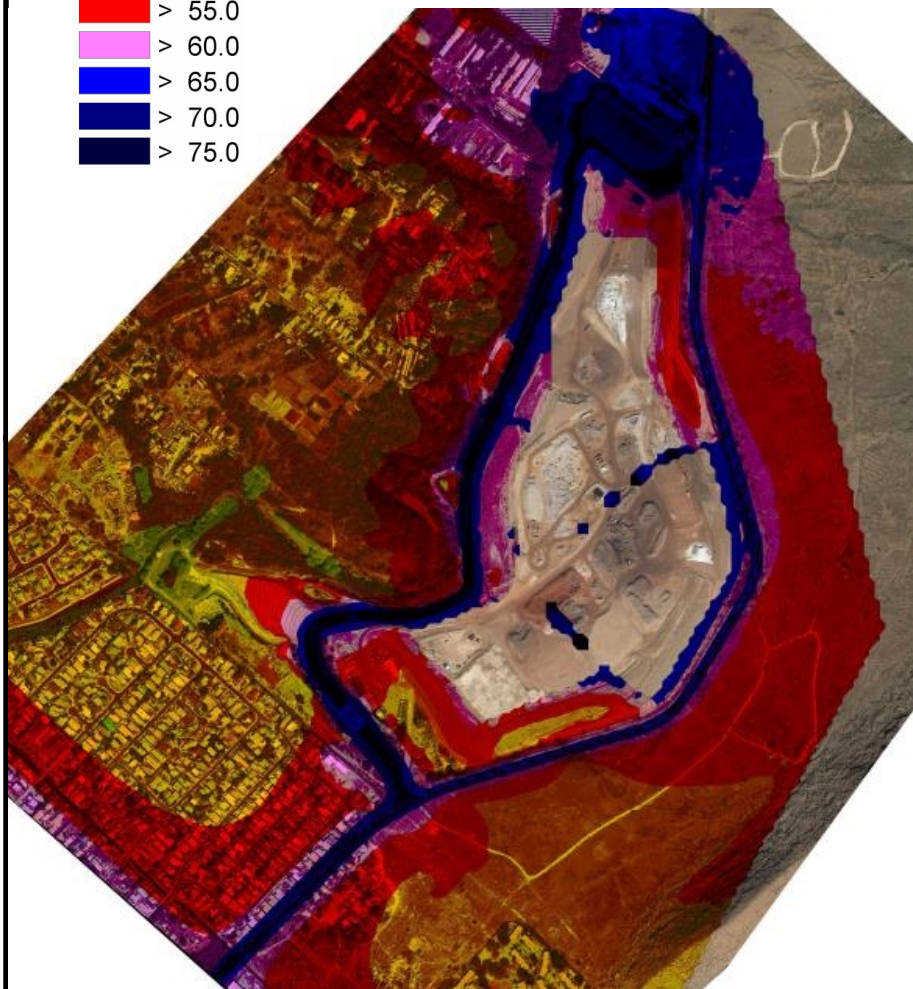
Source: Aerial photograph provided by Hexagon Imagery Program Data.



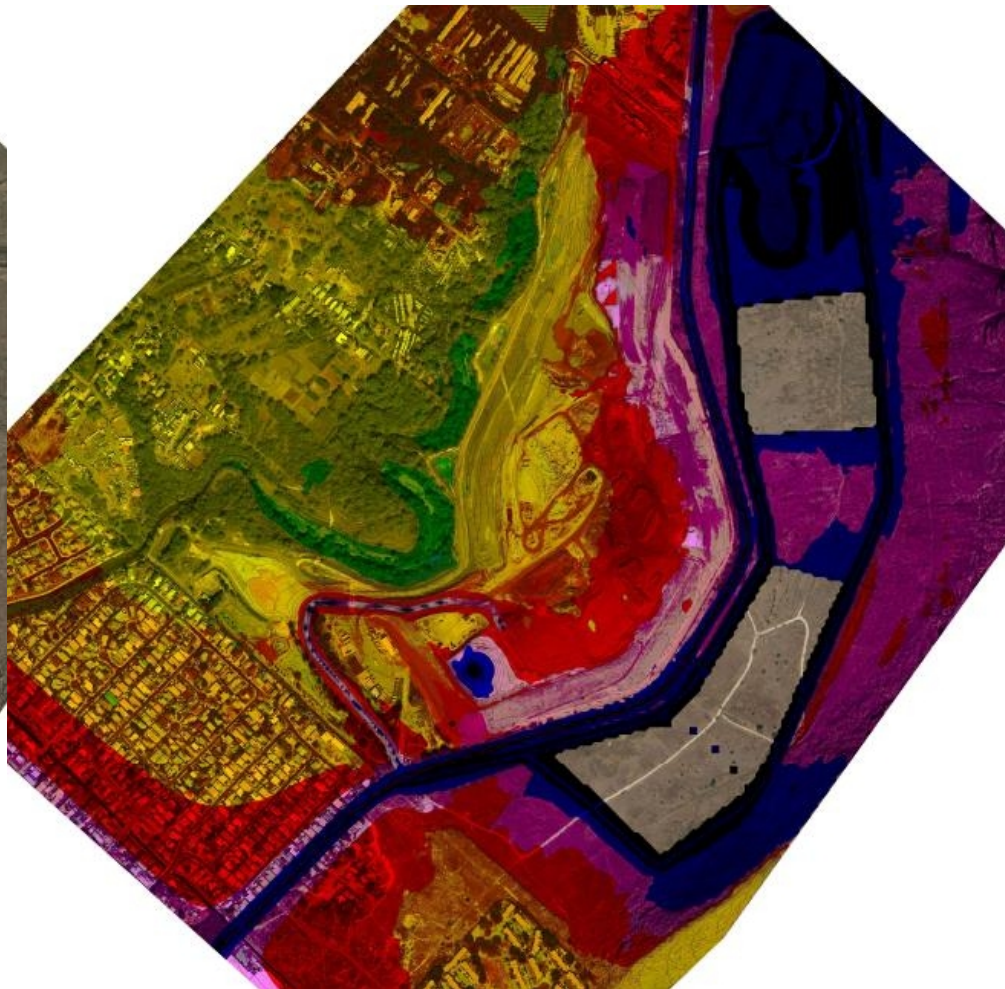
### Noise Level Contour Key



### Current Operations



### Relocation Scenarios



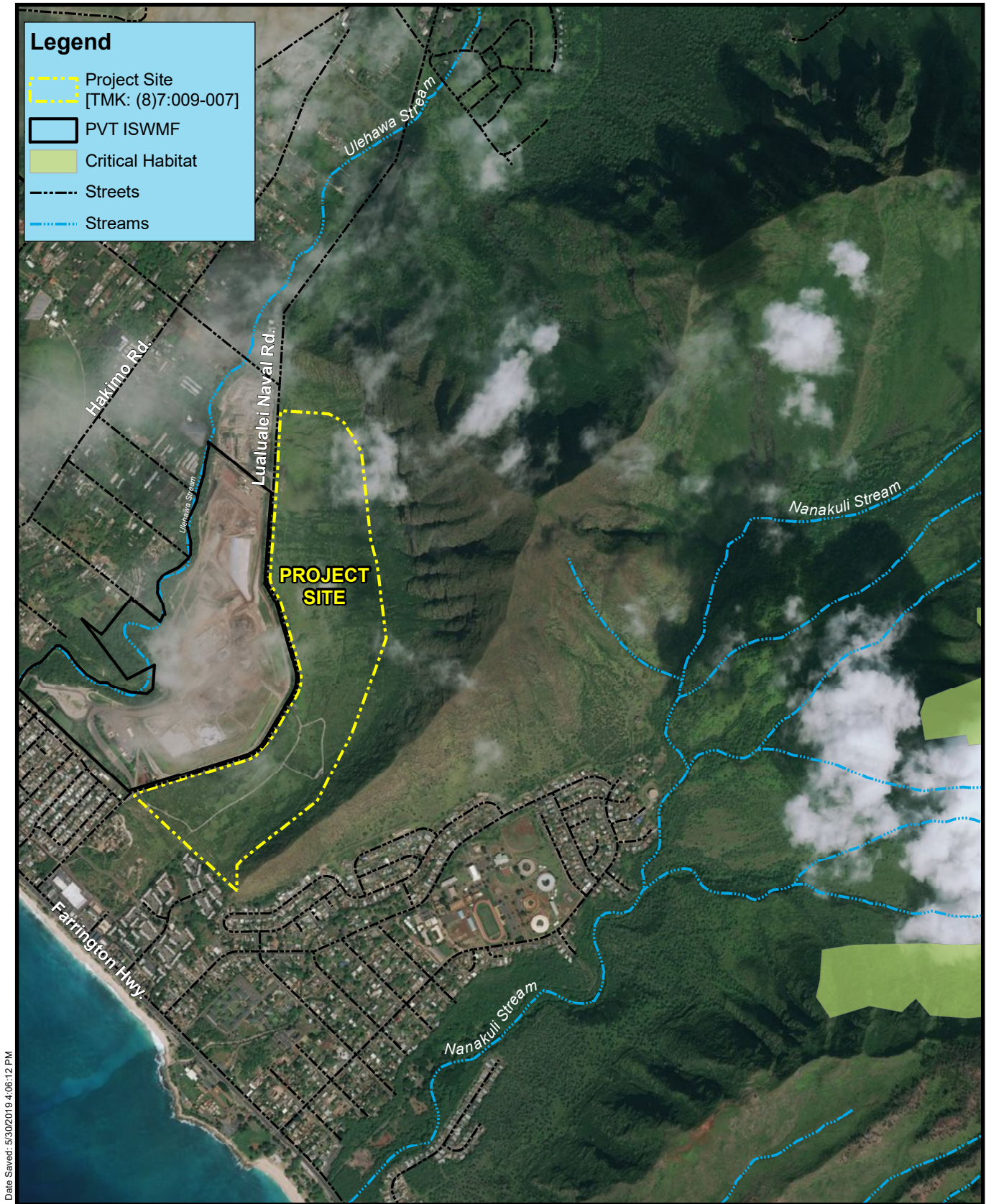
Source: D.L. Adams Associates 2018



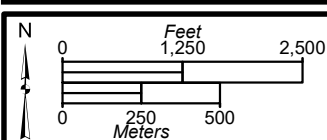
**Noise Contours**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-23**





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### Critical Habitat

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**3-24**

## 4 PUBLIC INFRASTRUCTURE AND SERVICES

### Section Contents

4.1	Transportation .....	4-2
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4.6	Community Facilities.....	4-30

The following revisions were made to Section 4 in the Final EIS in response to the Draft EIS comments.

<u>Section</u>	<u>Page</u>	<u>Revisions</u>
4.2.1	4-13	■ <b><u>Jacobs. (2019). DRAFT 2019 Integrated Solid Waste Management Plan Update. Honolulu, HI: Prepared for City and County of Honolulu.</u></b>
4.2.2.1	4-14	■ PVT operates the only public, commercial C&D facility on Oahu. Section 2, <i>Proposed Action and Alternatives</i> describes C&D debris management at the PVT ISWMF and the need for the Proposed Action. Briefly, the CCH relies on PVT to meet the need for C&D solid waste management over the 25-year planning horizon ( <b><u>Jacobs 2019</u></b> , CCH 2017, CCH <b><u>R.W. Beck 2008</u></b> ) and serve as a disposal site for emergency disaster debris (CCH 2017).
4.6.2	4-31	<b><u>MA'O Organic Farms is located within ¼ mile of the Project Site. MA'O Organic Farms operates an organic farm that supplies fresh produce to Oahu and the Waianae/Nanakuli Community and serves hundreds of school-aged and post-secondary youth through their internship and Farm 2 Fork programs.</u></b>
4.6.3.1	4-31	<b><u>The CCH Department of Parks and Recreation and Department of Community Services indicated that the Proposed Action would have no adverse impact on their respective facilities or programs (Section 10, Draft EIS Comments and Responses).</u></b>

## 4.1 Transportation

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on ground transportation, specifically vehicular traffic. Marine and airport transportation and infrastructure are not relevant to the Proposed Action and are not discussed.

### 4.1.1 Methodology

A *Traffic Impact Analysis Report* (TIAR) was prepared by The Traffic Management Consultants (TMC) for the Proposed Action and No Action Alternative (Appendix F). The TIAR scope of work included traffic counts in 2018 to assess the existing peak morning (AM) and afternoon (PM) traffic hour and traffic conditions of five roadways and intersections relevant to the Proposed Action. The baseline data was used to assess existing and future traffic conditions under the following scenarios:

- Existing (2018) traffic conditions based on field survey and traffic counts.
- 2030 traffic conditions with Proposed Action. With the Proposed Action, PVT ISWMF would continue to accept up to 300 haul trucks per day and employ up to 80 employees (Section 2.5.6.4, *Proposed Action Access, Traffic, and Parking*). As PVT operations are relocated, truck and employee traffic would shift from the PVT ISWMF to the Proposed Site on opposite side of Lualualei Naval Road.
- 2030 without Proposed Action (No Action Alternative). Without the Proposed Action, PVT ISWMF operations would slow (300 waste truck trips would be reduced to 150) and fewer employees (reduced from 80 to 57) would be required in the final years of the PVT ISWMF operations. This scenario reflects the short-term No Action Alternative. In the long-term, post-closure, the PVT generated traffic would be limited to minimal administrative staff.

The TIAR assumes a 0.6% annual increase in population on the Waianae coast to estimate the Year 2030 scenario peak hour traffic demands.

The TIAR includes all methods, assumptions, raw data, analysis and recommendations for the scenarios (Appendix F). The key findings and recommendations are summarized in this section.

### 4.1.2 Existing Conditions

#### 4.1.2.1 Scope of the Traffic Impact Analysis

##### Level of Service

Level of Service (LOS) is a classification system that assigns the level of roadway or intersection performance based on traffic modeling and analysis. The LOS is a measure of drivers' comfort and convenience based on travel time, traffic interruptions, speed, and freedom to maneuver. There are six LOS classes identified as "A" through "F", which are presented in Table 4-1. LOS "A", "B", and "C" conditions are considered satisfactory. LOS "D" is considered a desirable minimum, and LOS "E" and "F" are undesirable and unacceptable conditions, respectively.



**Table 4-1 Roadway Level of Service**

LOS	Traffic Description	Condition
A	Free Flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes. The average spacing between vehicles is about 27 car lengths.	Satisfactory
B	Reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted. The lowest average vehicle spacing is about 16 car lengths.	Satisfactory
C	Stable flow, at or near free flow. Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness. Minimum vehicle spacing is about 11 car lengths. Most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. Minor incidents may still have no effect, but localized service will have noticeable effects and traffic delays will form behind the incident. This is the target LOS for some urban and most rural highways.	Satisfactory
D	Approaching unstable flow. Speeds slightly decrease as traffic volume slightly increase. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease. Vehicles are spaced about 8 car lengths. Minor incidents are expected to create delays.	Desirable minimum
E	Unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there is no room to maneuver in the traffic stream and speeds rarely reach the posted limit. Vehicle spacing is about 6 car lengths, but speeds are still at or above 50 mph (80 km/h). Any incident will create serious delays. Drivers' level of comfort becomes poor. This is a common standard in larger urban areas, where some roadway congestion is inevitable.	Undesirable
F	Forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity.	Unacceptable

Source: TMC 2019.

The LOS classifications for intersections is similar to roadway LOS. Table 4-2 summarizes LOS classes, as they apply to intersections. Intersection LOS are based primarily on average time (seconds) for vehicles to advance through the intersection. The delays at intersections without traffic signals are generally longer than those with traffic signals.

**Table 4-2 Intersection Level of Service**

LOS	Delay with Traffic Signal (seconds per vehicle)	Delay Without Traffic Signal (seconds per vehicle)	Description	Condition
A	≤10	≤ 10	Control delay is minimal.	Satisfactory
B	10-20	10-15	Control delay is not significant.	Satisfactory
C	20-35	15-25	Stable operation. Queuing begins to occur.	Satisfactory
D	35-55	25-35	Less stable condition. Increase in delays, decrease in travel speeds.	Desirable minimum
E	55-80	35-50	Unstable operation, significant delays.	Undesirable
F	> 80	> 50	High delays, extensive queuing.	Unacceptable

Source: TMC 2019.

Other parameters are used to assess traffic conditions such as volume-to-capacity ratio, which is used to assess the volume of traffic on a roadway relative to the carrying capacity of the roadway. Carrying capacity is defined as the maximum number of vehicles that can pass a given point during a specific period under prevailing roadway conditions. For example, a volume-to-capacity ratio of 0.50 indicates the traffic demand is utilizing 50% of the roadway's capacity and the roadway can accommodate more traffic. These calculations of roadway volume-to-capacity as well as calculations of "delay" (vehicles per second) contribute to the LOS and are presented in the TIAR (Appendix F).

### Relevant Roadways

The five roadways and intersections included in the TIAR study area are identified on Figure 4-1, and described as follows:

- Farrington Highway is the primary arterial highway on the Leeward coast of Oahu, which carries about 50,000 vehicles per day in both directions. Farrington Highway is a two-way, four-lane highway oriented in the north-south direction. Paved shoulders and/or sidewalks are provided on both sides of the highway for pedestrian and bicycle use. The posted speed on Farrington Highway near the Project Site is 35 mph.
- Lualualei Naval Road is a two-lane, two-way roadway which provides primary access to the Lualualei Annex. It is also the sole access to the PVT ISWMF. The PVT ISWMF driveway is stop sign-controlled at its Tee-intersection with Lualualei Naval Road. Under the Proposed Action, access to the Project Site would be provided at the PVT ISWMF intersection.

An unpaved shoulder is provided on the north side of Lualualei Naval Road for pedestrian and bicycle use. The posted speed limit on Lualualei Naval Road ranges from 25 mph to 45 mph. Lualualei Naval Road has separate left-turn and right-turn lanes onto Farrington Highway at the intersection.



The Tee-intersection of Lualualei Naval Road with Farrington Highway has traffic signals. An exclusive left-turn lane is not provided from southbound Farrington Highway at the intersection.

- Princess Kahanu Avenue is a two-way, two-lane road which provides access to the Princess Kahanu Estate residential subdivision. It intersects with Farrington Highway and the Ulehawa Beach Park Driveway on the opposite (coastal) side of the highway. The four-way intersection has traffic signals. The Princess Kahanu Avenue approach onto Farrington Highway operates with separate left-turn and right-turn lanes. Exclusive left-turn lanes are provided in both directions from Farrington Highway at Princess Kahanu Avenue.
- Haleakala Avenue is a two-way, two-lane collector roadway which serves to move traffic from smaller local streets in Nanakuli to the arterial Farrington Highway. The Tee-intersection with Farrington highway has traffic signals. The highway was recently widened to provide a southbound exclusive left-turn lane onto Haleakala Avenue.
- Nanakuli Avenue is a two-way, two-lane collector roadway, which also provides access to Nanakuli from Farrington Highway. Farrington Highway was widened to provide exclusive left-turn lanes in both directions at Nanakuli Avenue. Nanakuli Beach Park Driveway is opposite Nanakuli Avenue at the four-way intersection. The intersection has traffic signals. The Nanakuli Avenue approach onto Farrington Highway operates with separate left-turn and right-turn lanes.

### **Pedestrian and Bicycle Traffic**

Peak traffic hour counts, pedestrian count, and bicycle count surveys were conducted on Lualualei Naval road in 2018. The pedestrian and bicycle traffic counts, to and from the PVT ISWMF on Lualualei Naval Road, including pedestrian traffic to and from Farrington Highway bus stops (bus routes 40, C, 403, and 93 to/from Nanakuli) were insignificant; therefore, the TIAR did not include a multi-modal capacity analysis, pedestrian LOS, or bicycle level of traffic stress (Appendix F).

### **Peak Traffic Hours**

Peak morning (AM) traffic on Farrington Highway occurred from 7:00 AM to 8:45 AM. Farrington Highway carried between 2,900 and 3,300 vehicles per hour, total for both directions. 60% of the traffic was southbound.

Peak evening (PM) traffic occurred between 3:00 PM and 4:45 PM. Farrington Highway carried between 3,000 vehicles per hour and 3,200 vehicles per hour total for both directions. 56% of the traffic was northbound.

The TIAR assumes the peak traffic hours are the same for all scenarios including those in the future, 2030.

#### 4.1.2.2 Existing Conditions

For ease of comparison, the existing and predicted, future traffic conditions are presented side-by-side in the sections below. The impacts analysis for the Proposed Action and No Action Alternative are presented in Section 4.1.3, *Impacts*.

#### PVT ISWMF Trip Generation Existing and Future

The existing peak hour trip generation characteristics for the PVT ISWMF are based on the average 2018 two-day field counts and the average of 57 employees, reported by PVT for those days. Over the full workday there were approximately 712 vehicle trips, and about 62% (443) were truck trips. About 75% of the truck traffic arrived and departed during the off-peak period of traffic, i.e., 9:00 AM to 3:00 PM.

57% of the employees reside north of Lualualei Naval Road and 43% reside south of Lualualei Naval Road.

Table 4-3 summarizes the peak hour trip generation at the PVT ISWMF under the three scenarios described above. For future scenarios, the TIAR assumes a 0.6% annual increase in population and corresponding increase in traffic on the Waianae coast.

**Table 4-3 Existing and Future PVT ISWMF Peak Hour Traffic**

Scenario	Destination		AM Peak			PM Peak		
	PVT ISWMF	Project Site	Enter	Exit	Total	Enter	Exit	Total
Existing Traffic at PVT ISWMF	100%	No traffic	46	39	85	12	56	68
2030 with Proposed Action	Office employees only	100% haul trucks and most employees	73	64	137	15	75	90
2030 without Proposed Action (No Action Alternative)	100%	No traffic	54	48	102	10	52	62

Source: TMC 2019.

Under the 2030 Proposed Action scenario, there would be up to 80 employees and 300 waste haul trucks per day. Only 25% of the 300 trucks (75 trucks) would affect peak hour traffic.

Under the 2030 without Proposed Action scenario, there would be 57 employees and 150 waste haul truck trips, as the PVT ISWMF operations slow down prior to closure. Only 38 trucks are likely to affect peak hour traffic.

#### Level of Service Existing and Future

The LOS for each scenario (existing conditions, 2030 without Proposed Action (No Action Alternative), and 2030 with Proposed Action) at AM and PM peak traffic conditions are presented in this section and in Figures 4-2 through 4-4.

## TIAR Summary

During AM and PM peak hours, the existing LOS at Farrington Highway intersections within the study area were acceptable to minimally acceptable (LOS A to D). By 2030, there would be additional traffic on the Waianae coast due to a predicted 0.6% annual increase in population. The LOS for the Farrington Highway intersections within the study area are expected to decrease one level in either the AM or PM peak hour.

The PVT ISWMF driveway-Lualualei Naval Road LOS is currently LOS C or better (acceptable) and would remain acceptable in 2030.

### LOS Lualualei Naval Road–PVT ISWMF Driveway Intersection

As shown in Table 4-4 the LOS for the Lualualei Naval Road-PVT ISWMF Driveway Intersection is satisfactory under all scenarios. Under the Proposed Action, the traffic destination will shift from the PVT ISWMF to the Project Site on opposite side of Lualualei Naval Road at the same intersection.

**Table 4-4 Lualualei Naval Road–PVT ISWMF Driveway Intersection**

Scenario	LOS	
	AM Peak	PM Peak
Existing Conditions	A	A
2030 with Proposed Action	B	A
2030 without Proposed Action (No Action Alternative)	A	A

LOS A through C = satisfactory; LOS D = desirable minimum; LOS E = undesirable; LOS F = unacceptable.

Source: TMC 2019.

### LOS Lualualei Naval Road-Farrington Highway

Table 4-5 summarizes the overall LOS for the Lualualei Naval Road-Farrington Highway intersection and identifies roadway conditions that are not acceptable. All other roadway conditions are acceptable at LOS C and above, and not included in the table.

**Table 4-5 Lualualei Naval Road-Farrington Highway**

Scenario	Intersection		Traffic Problem Areas			
			Farrington Southbound		Lualualei Approach onto Farrington	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Existing Conditions	C	B	D	≥ C	F	≥ C
2030 with Proposed Action	E	C	F	D	F	F
2030 without Proposed Action (No Action Alternative)	D	C	E	≥ C	F	F

LOS A through C = satisfactory; LOS D = desirable minimum; LOS E = undesirable; LOS F = unacceptable.

Source: TMC 2019

The existing traffic congestion at the intersection of Farrington Highway and Lualualei Naval Road is a result of the southbound traffic turning left into Lualualei Naval Road. This reduces the through capacity of

southbound Farrington Highway to a single lane, resulting in LOS “E” conditions, during the existing AM peak hour of traffic.

#### LOS Princess Kahanu Avenue-Farrington Highway

Table 4-6 summarizes the overall LOS for the Princess Kahanu Avenue-Farrington Highway intersection and identifies roadway conditions that are not acceptable. All other roadway conditions are acceptable at LOS C and above, and not included in the table.

**Table 4-6 Princess Kahanu Avenue–Farrington Highway**

Scenario	Intersection		Traffic Problem Areas			
			Princess Kahanu Avenue		Ulehawa Beach Park Driveway	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Existing Conditions	B	A	F	F	D	≥ C
2030 with Proposed Action	B	B	F	F	D	≥ C
2030 without Proposed Action (No Action Alternative)	B	B	F	F	D	≥ C

LOS A through C = satisfactory; LOS D = desirable minimum; LOS E = undesirable; LOS F = unacceptable.

Source: TMC 2019.

There would be no change to the existing LOS at this intersection and associated roadways associated with the Proposed Action. The traffic conditions on Princess Kahanu Avenue remain unacceptable in AM and PM peak hours.

#### LOS Haleakala Avenue-Farrington Highway

Table 4-7 summarizes the overall LOS for the Haleakala Avenue-Farrington Highway intersection and roadway conditions that are not acceptable. All other roadway conditions approaching the intersection are acceptable at LOS C and above.

Under existing conditions, the median lane on Farrington Highway was coned during the PM peak hour to provide a contra-flow lane in the northbound direction from Nanakuli Avenue to Haleakala Avenue. During the contra-flow operation, the left-turn movements from Farrington Highway were prohibited and therefore operated at a LOS F.

The overall intersection LOS in 2030 scenarios with and without Proposed Action remains the same, LOS D (minimally acceptable) in 2030 AM peak scenarios. The 2030 without Proposed Action southbound Farrington Highway traffic operated at a LOS D during AM peak hours but would reduce to LOS E under the Proposed Action.

**Table 4-7 Haleakala Avenue–Farrington Highway**

Scenario	Intersection		Traffic Problem Areas					
			Left turn from Haleakala		Right turn from Haleakala		Southbound Farrington	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Existing Conditions	C	A	F	F	E	≥ C	≥ C	≥ C
2030 with Proposed Action	D	A	F	F	E	≥ C	E	≥ C
2030 without Proposed Action (No Action Alternative)	D	A	F	F	E	≥ C	D	≥ C

LOS A through C = satisfactory; LOS D = desirable minimum; LOS E = undesirable; LOS F = unacceptable.

Source: TMC 2019.

#### LOS Nanakuli Avenue-Farrington Highway

Table 4-8 summarizes the overall LOS for the Nanakuli Avenue-Farrington Highway intersection and roadway conditions that are not acceptable. All other roadway conditions approaching the intersection are acceptable at LOS C and above.

**Table 4-8 Nanakuli Avenue–Farrington Highway**

Scenario	Intersection		Traffic Problem Areas	
			Nanakuli Avenue Approaches	
	AM Peak	PM Peak	AM Peak	PM Peak
Existing Conditions	D	A	F	F
2030 with Proposed Action	D	C	F	F
2030 without Proposed Action (No Action Alternative)	D	C	F	F

LOS A through C = satisfactory; LOS D = desirable minimum; LOS E = undesirable; LOS F = unacceptable.

Source: TMC 2019.

The median lane on Farrington Highway was coned to provide a contra-flow lane in the northbound direction between 3:30 PM and 6:30 PM from Nanakuli Avenue to Haleakala Avenue. During the contra-flow operation, the left-turn movements from Farrington Highway were prohibited and therefore operated at a LOS F.

Under the 2030 with and without Proposed Action scenarios, the LOS at the intersection and traffic problem area remains unchanged, suggesting the Proposed Action would not impact the traffic conditions.

### **Roadway Safety**

PVT requires all customers to be prequalified and commit to PVT policies before they are allowed to enter the ISWMF. These policies reduce the potential impact of the PVT ISWMF truck traffic on the surrounding community. The policies are as described for the Proposed Action in Section 2.5.6.4, *Proposed Action Access, Traffic, and Parking*. For example, PVT has a zero-tolerance policy for speeding on Lualualei Naval Road and encourages the community to report violators. Truck drivers must adhere to the hours of operation and early arrivers are penalized. No parking, idling, or queuing on Lualualei Naval Road is permitted.

### **Air Navigation**

There are PV panels at the PVT ISWMF which do not interfere with air navigation. There are no PV panels currently at the Project Site.

### **Pedestrian Circulation**

Signalized, mid-block pedestrian crosswalks exist at the intersection of: Farrington Highway and Lualualei Naval Road; Farrington Highway and Helelua Street; Farrington Highway and Haleakala Avenue; and Farrington Highway and Nanakuli Avenue. Exclusive pedestrian phases are provided at these intersections.

Lualualei Naval Road does not have a sidewalk and pedestrians use a gravel shoulder. PVT operations do not adversely impact pedestrian safety or circulation.

The PVT ISWMF does not operate at night and thus the Proposed Action does not impact nighttime pedestrian safety.

### **Emergency Access**

Farrington Highway is the sole public access route in and out of the Waianae Coast. It has been blocked on occasion by accidents, natural disaster, and other uncontrollable forces, thereby leaving commuters stuck in their cars or stranded.

The Waianae Coast Emergency Access Road (WCEAR) is shown on Figure 4-5. The route includes a segment of Lualualei Naval Road adjacent to the PVT ISWMF and an unnamed roadway that connects Lualualei Naval Road to Helelua Place south of the Project Site. There are also proposals for a road parallel to Farrington Highway that may include a segment along the south end of the Project Site (See Section 5.3, *Socioeconomic Resources and Land Use Characteristics*) but the alignment has not been studied, selected, or finalized.

In the event of an emergency, the PVT ISWMF is designated by CCH to accept disaster debris during the recovery phase. Clear roadway access to PVT ISWMF would be a priority for recovery and would benefit the community and provide quicker traffic relief.



### **4.1.3 Impacts**

#### **4.1.3.1 Proposed Action**

Under the Proposed Action, there would be a less than significant short- and long-term, direct and indirect adverse impact on Farrington Highway roadway traffic and the intersection with Lualualei Naval Road.

Based on the TIAR, the Proposed Action is expected to increase the traffic at the intersection of Farrington Highway and Lualualei Naval Road by about 1.0% and 0.8%, during the AM and PM peak hours of traffic, respectively. Beyond the Lualualei Naval Road intersection, the Proposed Action's impact on other intersections in the study area decreases to 0.5% or less.

The TIAR describes an increase of 35 vehicles per hour in the AM peak hours and 28 vehicles per hour in the PM peak hours under the 2030 Proposed Action. According to the professional standards TMC relied upon, these increases do not warrant traffic access and impact studies because they do not meet the minimum thresholds of (1) an increase in trip generation of 100 vehicles per hour in peak traffic hours and (2) a 5% increase in traffic demands over prevailing traffic conditions. The Proposed Action trip generation is well below the thresholds. There would be a less than significant adverse impact on Farrington Highway traffic conditions.

#### **Traffic Improvements**

TMC recommends traffic improvements at the intersection of Farrington Highway and Lualualei Naval Road to mitigate Farrington Highway's anticipated drop in LOS in 2030 with or without the Proposed

Action. The following recommended mitigation measures would be implemented by government agencies, not PVT and are not currently programmed for funding:

- Widen southbound Farrington Highway at Lualualei Naval Road to provide an exclusive left-turn storage lane (minimum 125-foot storage length).
- Modify traffic signal timing at the intersection of Farrington Highway and Lualualei Naval Road, as necessary.
- Modify the traffic signal coordination along Farrington Highway, as necessary.

The exclusive left-turn storage lane at the Lualualei Naval Road and Farrington Highway intersection will prevent the queue from blocking the southbound traffic. The 2030 AM peak hour traffic operations at the intersection of Farrington Highway and Lualualei Naval Road would improve from LOS E to LOS B. Southbound Farrington Highway would improve from LOS F to LOS A. During the PM peak hour of traffic, these recommendations would improve traffic operations at the intersection from LOS C to LOS B. Southbound Farrington Highway would improve from LOS D to LOS A.

The TIAR does not recommend traffic mitigation measures for the less than significant adverse impact of the Proposed Action on traffic conditions.

### **Roadway Safety**

PVT would continue the same operation policies at the Project Site as at the existing PVT ISWMF, thereby mitigating PVT's traffic impacts to the community to the extent practical (See 2.5.6.4, *Proposed Action Access, Traffic, and Parking*).

### **Air Navigation**

A glint and glare study would be done for the proposed PV panels at the Project Site prior to installation. The design and materials would be modified to mitigate adverse impacts to drivers or pilots. Prior to installation of PV panels, a management plan requiring removal or covering of the PV panels will be in place to immediately respond to HDOT, Airports Divisions and/or Federal Aviation Administration notification of a glint or glare hazard to pilots.

### **Pedestrian Circulation**

The Proposed Action would have no impact on existing pedestrian safety or circulation.

### **Emergency Access**

The Proposed Action would not impact existing emergency access conditions.

Under the Proposed Action, there would be no short-, long-term, direct or indirect impact on roadway safety, pedestrian safety, air navigation or emergency access.

#### **4.1.3.2 No Action Alternative**

##### **Traffic Conditions**

In the short-term (2030 without Proposed Action scenario), the LOS at Lualualei Naval Road-Farrington Highway intersection would improve compared to the 2030 Proposed Action scenario. The Project Site would not be developed and would not generate employee or waste haul truck traffic. However, the PVT ISWMF would operate at a reduced tempo (fewer employee and truck trips) until it reaches capacity.

In the long-term, the PVT ISWMF would reach capacity and the waste haul truck traffic on Lualualei Naval Road to the existing PVT ISWMF would cease. Only a few employees would be required to manage the PVT ISWMF during closure and post-closure. This would have a long-term direct beneficial impact on traffic conditions at the Lualualei Naval Road-Farrington Highway intersection during peak traffic conditions.

Under the No Action Alternative, there would be no short- or long-term, direct or indirect impact on roadway safety, pedestrian safety, air navigation or emergency access.

#### **4.1.4 Summary of Impacts and Potential Mitigation**

Traffic condition improvements (Section 4.1.3, *Impacts*) are recommended for the Farrington Highway–Lualualei Naval Road intersection to improve the LOS. The recommendations are not related to the

Proposed Action and would be implemented by government agencies. The less than significant adverse impact associated with the Proposed Action does not warrant mitigation.

**Table 4-9 Transportation Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Short-term Impacts	Long-term Impacts
	Direct	Indirect	Direct	Indirect		Direct	
Roadway and intersection traffic conditions	<	<	<	<	None	0	+
Roadway Safety	0	0	0	0	None	0	0
Air Navigation	0	0	0	0	None	0	0
Pedestrian Circulation	0	0	0	0	None	0	0
Emergency Access	0	0	0	0	None	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 4.2 Solid Waste and Litter

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on solid waste facilities/services and control of litter.

### 4.2.1 Methodology

The following references were used for Oahu's existing and future solid waste generation and recycling volume estimates. Government plans to manage waste were based on CCH data:

- *Assessment of Municipal Solid Waste Handling Requirements for the Island of Oahu*. Department of Environmental Services, City and County of Honolulu. November 2017.
- Recycling and Landfill Diversion. City and County of Honolulu. April 2019. Retrieved from: [http://www.opala.org/solid\\_waste/archive/facts2.html](http://www.opala.org/solid_waste/archive/facts2.html).
- R.W. Beck. (2008). *Integrated Solid Waste Management Plan Update*. Retrieved February 2019, from [http://www.opala.org/solid\\_waste/pdfs/2008\\_ISWMP.pdf](http://www.opala.org/solid_waste/pdfs/2008_ISWMP.pdf).
- Jacobs. (2019). DRAFT 2019 Integrated Solid Waste Management Plan Update. Honolulu, HI: Prepared for City and County of Honolulu.

## 4.2.2 Existing Conditions

### 4.2.2.1 Oahu Waste Management

There are four solid waste management facilities on Oahu: CCH-owned Waimanalo Gulch Sanitary Landfill (WGSL); CCH-owned Honolulu Program of Waste Energy Recovery (H-POWER); the privately-owned PVT ISWMF, and the Kaneohe Marine Corps Base Hawaii (MCBH) MSW and C&D Landfill (Table 4-10).

- WGSL, the only public MSW landfill on Oahu, accepts two types of refuse: MSW, which is waste generated by residential, commercial, some military, and agricultural activities; and H-POWER ash and residue, a by-product of incinerating waste to generate electricity. WGSL does not accept C&D materials.
- H-POWER is a waste-to-energy facility in Campbell Industrial Park. H-POWER is owned by the CCH and operated by Covanta Energy. It accepts household trash, sewage sludge, some tires, some medical waste, and other special wastes. It provides approximately 10% of Oahu's electricity. By-products of the process include metals, ash, and residue. The ash and residue are landfilled at WGSL and the metals are recycled. H-POWER does not accept C&D materials.
- PVT operates the only public, commercial C&D facility on Oahu. Section 2, *Proposed Action and Alternatives* describes C&D debris management at the PVT ISWMF and the need for the Proposed Action. Briefly, the CCH relies on PVT to meet the need for C&D solid waste management over the 25-year planning horizon (Jacobs 2019, CCH 2017, R.W. Beck 2008) and serve as a disposal site for emergency disaster debris (CCH 2017).
- Kaneohe MCBH landfill is a resource for the U.S. military only. The MCBH landfill is used for the disposal of solid wastes authorized by their landfill permit. The MCBH's Facilities Department is responsible for maintaining and operating the landfill. Government personnel and tenant activities at the MCBH may use the landfill for solid waste disposal unless otherwise directed. Solid waste generated by contractors, family-housing residents, and waste generated from off-base activities are not accepted at the MCBH landfill (USMC 2005).

**Table 4-10 Active Solid Waste Management Facilities on Oahu**

Facility Name	Type of Waste	Operation
WGSL	MSW and H-POWER ash and residue	1985-Present
H-POWER	MSW	1990-Present
PVT ISWMF	C&D	1992-Present
Kaneohe MCBH	MSW and C&D	1979-Present

Source: CCH 2017.

Figure 4-6 shows tons of waste accepted at the non-Federal facilities from 2013-2017. The total waste managed on Oahu increased from approximately 1.6 million tons to 2 million tons, and the percentage of total waste diverted from landfills increased from 75.5% to 82.7%.

The amount of C&D debris generated is dependent on the construction industry and is variable year-to-year. As shown on Figure 4-6, the percentages of total waste that were attributed to C&D for the years 2013-2017 were 9.8%, 13.3%, 12.9%, 12.4%, and 4.7%, respectively.

#### **4.2.2.2 Oahu Recycling**

Oahu recycling rates are above the national average. Honolulu ranks among the top cities in the Country in landfill diversion at a rate of 82.7% Total Landfill Diversion (MSW/C&D) in 2017, a 5% increase from 2016 and over 500% increase since data collection started in 1988. The CCH Refuse Division reported 1,260,00 tons recycled in 2016, based on the annual recycling data survey (ENV 2017b).

Public education programs encourage residents and businesses to reduce the amount of waste generated so there is less waste to be managed. As of July 1, 2015, businesses are prohibited from providing plastic bags and non-recyclable paper bags to their customers. This encourages the reuse of shopping bags and reduces the amount of waste generated.

The CCH also manages residential recycling programs that encourage the sorting of waste to facilitate recycling. There are State and CCH laws that require businesses to segregate certain components of their waste stream, so the waste can be diverted from landfills and recycled. Bars and restaurants must separate glass from the solid waste. Office buildings, including Government offices, must set aside paper for recycling. Electronic waste is banned from landfills and State law requires manufacturers to take back electronic equipment for recycling. Tires, auto batteries, and scrap metal are also banned from landfills. Large-scale food preparation facilities (e.g., hotels, restaurants, hospitals) are required to recycle food waste. These segregated materials are recycled, repurposed, or used for power generation. CCH offices are required to purchase paper products with recycled content (ENV 2015).

#### **4.2.2.3 PVT ISWMF C&D Debris Management and Recycling**

PVT ISWMF recycles and reuses approximately 80% of incoming C&D debris per year (approximately 200,000 tons), as described in Section 2, *Proposed Action and Alternatives*.

PVT also encourages sustainable construction practices by offering Leadership in Energy and Environmental Design (LEED) reporting to customers who wish to acquire LEED points when they recycle. Separation of waste materials for LEED points occurs at the PVT ISWMF because worksites are too constrained to implement such a system. Contractors who use PVT LEED services earn points based on the percentage of their waste that is recycled. The points can be used toward attaining various levels of LEED certification from the U.S. Green Building Council, which administers the LEED program. One to three LEED points are earned for 50%, 75%, and 95% diversion of C&D materials from the landfill. PVT tracks and documents the weight and volume of the materials by type (required to earn points) and provides a recycle report for LEED documentation.

Unlike MSW, the PVT ISWMF waste is heavy and unlikely to be a litter nuisance. PVT implements a litter control program that includes inspections, a litter control fence, and daily cover, as described in Section 2.5.7.1, *Litter Control*. Additional procedures are implemented in the event of a pending wind storm.

The PVT ISWMF operations generate a small amount of MSW that is managed by PVT.

#### **4.2.2.4 Landfill Capacity**

The amount of MSW generated on Oahu is projected to increase with population growth. There is enough capacity for the WGSL to accept waste up to 2038 (CCH 2017). Projections were based on Oahu's de facto population data (including tourist information) from the State of Hawaii Department of Business, Economic Development and Tourism along with expected recycling diversion rates, to develop a waste generation scenario through year 2040. Using conservative projections, up to 860,000 tons of MSW may need to be handled by the CCH by 2040. The H-POWER facility would process most of this tonnage, approximately 820,000 tons, with approximately 253,000 tons of material (MSW and H-POWER ash and residue) requiring landfill disposal. These projections assumed WGSL would be maximizing existing air space through the planned landfill cell reconfiguration (CCH 2017).

C&D debris generation is dependent on the construction industry. PVT proposes to continue to manage the CCH's C&D debris. The CCH is relying on PVT to provide this service through year 2040 (CCH 2017). PVT has extended the life of the PVT ISWMF through recycling technologies. However, the construction industry has generated more debris than anticipated and the PVT ISWMF is nearing capacity. The Proposed Action would meet a need for additional capacity, while continuing to recycle and reuse 80% of the incoming C&D debris.

#### **4.2.2.5 Disaster Debris Management**

The first step in recovery from a natural disaster (Section 3.3, *Natural Hazards*), is debris removal and management, beginning with the clearing of debris from priority roadways. The CCH Disaster Debris Management Plan (2001) and the Makani Pahili 2019 Honolulu Debris Management Workshop records acknowledge PVT's critical role in managing C&D disaster debris. A category 4 hurricane that directly hits Oahu is considered the worst-case probable disaster planning scenario. Under this scenario, PVT would receive approximately 2/3 of the anticipated 6.2 million cubic yards of all C&D debris generated on Oahu, which is comparable in volume to filling Yankee Stadium five times.

In the event of a disaster, PVT ISWMF would receive the C&D debris, bury it, and recover it later for recycling and reuse. PVT would utilize the MRD units to sort the debris, generate feedstock and ultimately use the feedstock to generate renewable electricity on or off site.

The first priority in the post-disaster recovery is clearing roads and providing access to critical facilities, such as the PVT ISWMF, hospitals, and utility plants. The communities along the critical routes (including the route to PVT) would also benefit from expedited roadway clearing, debris removal, and restoration of community services.

### **4.2.3 Impacts**

#### **4.2.3.1 Proposed Action**

The Proposed Action would have long-term, direct and indirect beneficial impacts on Oahu's solid waste management, recycling, and disaster debris management programs.



In the short-term, while the Project Site is being developed, PVT ISWMF would continue to provide the existing beneficial C&D debris and disaster C&D management services. When the PVT ISWMF reaches capacity and is closed, the Proposed Action would provide adequate capacity to meet the CCH's long-range planning forecasts for Oahu's C&D and emergency disaster C&D debris.

As discussed in Section 2, *Proposed Action and Alternatives*, approximately 75 acres of the 179-acre Project Site would be developed to receive C&D debris for an estimated total disposal capacity of 11,923,000 cubic yards. Of the approximately 250,000 tons of C&D debris processed, PVT landfills about 20%. The remaining 60% is converted to feedstock for energy production, and 20% is recycled or reused, totaling 80% of the debris processed. The Proposed Action would continue this 80% rate of recycling (Section 2.5, *Description of the Proposed Action*).

With the two proposed MRD units, PVT would be able to process C&D and emergency C&D debris more efficiently than the existing PVT ISWMF single MRD unit. The two MRD units would maximize the amount of debris that is ultimately diverted from the landfill and increase feedstock production from 800 to 1600 tons per day.

The Proposed Action would have no impact on WGSL or H-POWER facilities or operations. The CCH ENV Refuse Division strongly supports development of the new location for the PVT ISWMF (Section 9, *Comments on the EISPN and Responses*).

The CCH has also identified PVT-managed land as a favorable staging area for general relief efforts (e.g., storage for food, equipment, tents and other supplies) because the Proposed Action includes the capability to generate water and renewable energy onsite. PVT would provide a long-term benefit to public health during disaster recovery.

There would be no short- or long- term, direct or indirect impacts related to litter under the Proposed Action. The environmental controls employed at the PVT ISWMF regarding litter would continue (Section 2.5.7.1, *Litter Control*).

#### **4.2.3.2 No Action Alternative**

The No Action Alternative would have long-term significant direct and indirect adverse impacts on the Oahu's solid waste management, recycling, and emergency debris management programs.

Under the No Action Alternative, the existing PVT ISWMF would continue to provide C&D waste management services in the short-term until it reaches capacity (Section 2.4.5, *Closure of PVT ISWMF C&D Landfill*). When PVT ISWMF landfill closes, there would be no commercial C&D debris landfill on Oahu. No alternative C&D waste management facility has been identified. The use of Oahu's CCH municipal solid waste management facility for C&D debris would be a significant adverse impact to the landfill capacity, especially if the landfill operations are not equipped to divert 80% of the C&D debris from the landfill.

Mitigation by others (not the Applicant) would be warranted to address these significant adverse impacts caused by the No Action Alternative. The CCH would be responsible for identifying, developing, and operating an alternative C&D landfill to meet forecasted C&D debris volumes, potential emergency

disaster debris, and/or shipping C&D waste off-island at government expense. The CCH ENV Refuse Division concurs with this conclusion and states, "Should the "No Action Alternative" be the determined outcome of the [EIS] process, the City would need to make drastic changes to find a new disposition for the C&D waste stream and incur "the costs associated with siting, permitting, managing, and operating a public facility," as cited in the EISPN" (Section 9, Comments on the EISPN and Responses).

PVT would not be able to support the CCH disaster debris management plan and alternative plans would be required.

Without a C&D debris disposal and processing facility option, there may be an increase in unauthorized debris dumping in the community, and a likely decrease in recycling. The cost to operate a new C&D facility would likely be double the disposal rate that PVT currently charges.

The Project Site would remain undeveloped but managed by PVT from a security standpoint. Illegal dumping and litter disposal at the Project Site would be mitigated by PVT security.

#### 4.2.4 Summary of Impacts and Potential Mitigation

The Proposed Action would provide long-term uninterrupted beneficial impacts on Oahu's solid waste management and recycling program. PVT would provide a long-term beneficial impact on disaster recovery. The proposed two MRD lines would increase the efficiency of the recycling and recovery efforts relative to existing conditions. No additional mitigation measures are recommended or necessary.

Under the No Action Alternative, PVT would continue to accept C&D debris at the PVT ISWMF until landfill closure. In the long-term, post closure of the landfill, there would be significant adverse impacts to Oahu's C&D debris and emergency debris management. The existing high rate of recycling and diversion from the landfill would not be met. Mitigation measures to offset significant adverse impacts from the No Action Alternative would be warranted by the CCH.

**Table 4-11 Solid Waste and Litter Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Oahu solid waste management	0	0	+	+	none	-	-
Litter	0	0	0	0	none	0	0
Recycling and reuse	0	0	+	+	none	-	-
Disaster debris management	0	0	+	+	none	-	-

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 4.3 Water and Wastewater

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on water (potable and non-potable) and wastewater services.

### 4.3.1 Methodology

This section focuses on the development of potable water and wastewater infrastructure for the Project Site and use of the existing non-potable groundwater. The proposed stormwater and leachate management systems, and potential impacts to the environment are addressed in Section 3, *Natural Environment*. Figure 2-9 shows the proposed utility infrastructure.

Potable water is suitable for human consumption, while non-potable water has not been examined, properly treated, or approved by appropriate authorities as being safe for consumption.

Wastewater is any water that has been adversely affected in quality by anthropogenic influence. Wastewater can originate from a combination of domestic, industrial, commercial, or agricultural activities.

The BWS and DLNR's Commission on Water Resource Management (CWRM) are responsible for potable water service and non-potable water, respectively. Wastewater is regulated by the HDOH Wastewater Branch. The municipal wastewater treatment plant (WWTP) that provides service to the area is the Waianae WWTP.

### 4.3.2 Existing Conditions

The Project Site does not have any potable water, wastewater processing infrastructure, or existing municipal sewer service lines. Non-potable infrastructure includes two brackish groundwater wells and storage tanks.

#### 4.3.2.1 Potable and Non-Potable Water

##### Potable Water

Potable water serviced to the Waianae District is achieved by pumping of groundwater aquifer resources by the BWS. The source aquifers that service Waianae District and Project Site are: Keaau, Makaha, Waianae, Lualualei, and Nanakuli. The Waianae District Sustainable Yield (SY) is approximately 15 million gallons per day (mgd). The HRS Ch. 174C, State Water Code, defines SY as "the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the commission."

According to the BWS's *Waianae Watershed Management Plan* (BWS 2009), total water demand for Waianae in 2000 was 9.34 mgd. The plan estimates future water demands for Waianae to increase to 11.68 mgd by 2030. Waianae will need to diversify its water supply sources to meet future needs. In particular, the Plan indicates that future water demands for the Waianae District will be met through: 1) sustainable use of in-district groundwater and 2) continued imports of potable water from the Pearl Harbor Aquifer Sector, specifically from the Waipahu-Waiawa aquifer system area. In the mid-to long-

term, water imports may include some water from desalination facilities located at Kalaeloa and Campbell Industrial Park. The planned water sources are expected to provide far more than the estimated demand in 2030.

Lualualei, Waianae, and Makaha are serviced by the BWS Lualualei Line Booster Pump Station. Improvements to the Station are planned in 2019 to install new 24-inch water mains, new variable frequency drive pumps and controls, a new sodium hypochlorite system, and other features to address operation and capacity issues. The improvements will increase the pumping capacity of the Lualualei Line Booster station from 5 to 10 mgd to meet current demands and anticipated water demands in the future.

BWS provides potable water to PVT ISWMF. The PVT ISWMF currently uses an annual average of 65,000 gpd of potable water for irrigation, office trailers, and daily washout of dust suppression trucks and equipment. PVT also uses potable water for irrigation of a 750-foot buffer zone, including a nursery, at the south end of the property.

Currently, there is no potable water access or use on the undeveloped Project Site. The same water usage is planned for the Proposed Action.

#### **Non-Potable Water**

There are two private groundwater wells on the Project Site. The brackish, non-potable water from these wells is pumped into two existing aboveground tanks (approximately 25,000 gallons each). Non-potable water usage is documented with meters installed on the output of the wells (DLNR Well No: 2308-04). Water usage for the PVT ISWMF is approximately 100,000 gpd. The same water usage is planned for the Proposed Action. Daily water extraction does not exceed maximum permitted use.

Non-potable water is used by the PVT ISWMF primarily for dust control. One to seven water trucks are used per day depending on weather conditions. Each truck has a capacity of 4,000 gallons and may be used approximately 6 hours per day. On rare occasions, water trucks will run on the weekend to reduce dusty conditions. PVT applies non-potable water prior to and after C&D debris is placed on the active landfill face to reduce dust and aid compaction. Operational controls to minimize non-potable water use include drought-tolerant vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (e.g., portions of the MRD Area).

#### **4.3.2.2 Wastewater**

The PVT ISWMF sanitary wastewater is managed onsite utilizing a private septic system. There is no wastewater management infrastructure at the Project Site. Neither location utilizes CCH municipal sewer service lines.

### **4.3.3 Impacts**

#### **4.3.3.1 Proposed Action**

##### **Potable and Non-Potable Water**

Relative to existing conditions, there would be little, if any, net increase in potable or non-potable water use as operations transition from the PVT ISWMF to the Project Site. Three additional potable and non-potable aboveground tanks are planned to be located in the MRD Area (Figure 2-9). Water usage from each well is permitted up to a maximum of 288,000 GPD (Section 2.5.6, *Infrastructure*). Water usage for the PVT ISWMF is approximately 100,000 gpd.

Future potable water use is expected to be minimal for the Proposed Action, constituting less than 0.01% of the total future demand for the Waianae Region in 2030. Potable water will be produced onsite from brackish water using two reverse-osmosis skid-mounted systems or obtained from BWS. Unused portions of the landfill will be vegetated to reduce the need for dust suppression (Section 3.5, *Air Quality*).

Potable and non-potable water would continue to be sourced from two brackish water wells on the Project Site and pumped into two existing and three planned above ground tanks located near the wells (Figure 2-9). Daily water pumping would not exceed permitted use. Non-potable/brackish water would be used as the primary method of dust control. Operational controls to minimize non-potable water use would include drought-tolerant vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (e.g., portions of the materials recovery areas). Potable water would be used for facilities and select vegetation.

No additional mitigation measures are necessary or required.

##### **Wastewater**

The Proposed Action would have no short-, long-term, direct or indirect impact on the CCH sanitary sewer system because there would be no service connection to the Project Site. The Proposed Action will construct two separate on-site septic systems designed to meet HAR Ch. 11-62 (Figure 2-9), and PVT would obtain necessary permits for the systems (Section 2.5.6, *Infrastructure*). No sanitary wastewater would leave the Project Site.

The PVT ISWMF does not have a CCH sanitary sewer connection.

#### **4.3.3.2 No Action Alternative**

##### **Potable and Non-Potable Water**

Under the No Action Alternative, there would be no BWS water service connection to the Project Site and no impact is anticipated.

In the short-term, until the PVT ISWMF stops accepting debris, there would be no change in the PVT ISWMF demand for potable water and non-potable water. In the long-term, after the final landfill cover is

in place, there would be a reduced demand for water and potable water and a beneficial impact from the decreased demand.

## Wastewater

Under the No Action Alternative, no wastewater infrastructure would be constructed on the Project Site.

### 4.3.4 Summary of Impacts and Potential Mitigation

The Proposed Action would not change the existing potable and non-potable water use. No major infrastructure or supply improvements will be required to provide potable or non-potable water for the Proposed Action. As is current practice, the Proposed Action would not affect the public sanitary wastewater infrastructure. Relative to existing conditions, the No Action Alternative would have no effect on wastewater services, but there would a long-term direct beneficial impact on potable and non-potable water supply demand when the existing PVT ISWMF is closed.

**Table 4-12 Water and Wastewater Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Demand on potable water resources services and infrastructure	0	0	0	0	none	+	0
Demand on non-potable groundwater resources	0	0	0	0	none	+	0
Demand on wastewater services and infrastructure	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 4.4 Power and Communication

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on power and communication services.

### 4.4.1 Methodology

HECO and Hawaiian Telcom provide power and communication services, respectively, to the PVT ISWMF and vicinity. The existing infrastructure is aboveground and readily observed.

### 4.4.2 Existing Conditions

The PVT ISWMF uses HECO power and Hawaiian Telcom telecommunication infrastructure. PVT offsets some electrical demand through its PV renewable energy system.



The Project Site is not connected to HECO or Hawaiian Telcom infrastructure. There is an active, HECO 46 kilovolt overhead line that goes through the Project Site and an overhead power line along the eastern edge of Lualualei Naval Road. Hawaiian Telcom overhead service lines are also evident in the vicinity.

### **4.4.3 Impacts**

#### **4.4.3.1 Proposed Action**

Under the Proposed Action, the demand for power and telecommunications would shift from the PVT ISWMF to the Project Site. HECO and Hawaiian Telcom infrastructure would be provided at the Project Site via existing infrastructure on Lualualei Naval Road. Onsite the service lines would be underground, as shown on Figure 2-9. No short- or long-term, direct or indirect adverse impact to HECO service or Hawaiian Telcom infrastructure is anticipated.

In the long-term, PVT intends to meet 100% of its proposed power needs through renewable energy sources (e.g., PV, gasification unit, or anaerobic digestion system), as described in Section 2.4.3, *Renewable Energy Production*. Reliance on HECO power would decline until these renewable energy goals are met and onsite demand for HECO service would be limited to providing backup power. The reduction in power demand would be a long-term direct impact on HECO capacity. The 46 kilovolt HECO overhead line that currently is aligned through the Project Site would be realigned along the southern perimeter boundary of the Project Site (Figure 2-3), in coordination with HECO.

There would be no short- or long-term, direct or indirect impact on Hawaiian Telecom services.

#### **4.4.3.2 No Action Alternative**

Under the No Action Alternative there would be no power or communication service connections at the Project Site. Relative to existing conditions, this would have no impact on these services and infrastructure.

The HECO overhead line would remain in place and continue to provide power to the PVT ISWMF for the office trailers, and pump water from the groundwater wells to the aboveground storage tanks.

In the short-term, the PVT ISWMF would continue to operate until it reaches capacity and final cover is installed. In the long-term, during post-closure, there would be a beneficial impact on HECO capacity. Post-closure activities at the PVT ISWMF include monitoring and maintenance of the landfill final cover and stormwater management systems, LCRS operation, and groundwater monitoring. The existing office trailers would be maintained as headquarters for managing post-closure activities.

### **4.4.4 Summary of Impacts and Potential Mitigation**

The Proposed Action would have no short-term (i.e., site development phase) impact on the demand for power or communication services. In the long-term, when the relocation of operations is complete, there would be a beneficial impact to the demand for HECO services due to the renewable energy initiatives and no impact on communications service.

Under the No Action Alternative, there would be no change to the use of these services until PVT ISWMF stops accepting waste. There would be a long-term beneficial impact on power demand during post-closure when the demand for power is reduced.

**Table 4-13 Power and Communications Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Demand on electrical power	0	0	+	0	none	+	0
Demand on communication	0	0	0	0	none	0	0

*Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.*

## 4.5 Emergency Services

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on police, fire, and medical services.

### 4.5.1 Methodology

The emergency services facilities in the vicinity were mapped and described. The existing conditions and potential impacts were assessed based on the PVT ISWMF use of these services.

### 4.5.2 Existing Conditions

#### 4.5.2.1 Police Services

The CCH's Honolulu Police Department (HPD) District 8 response area is from Kapolei to Waianae. It includes the Kapolei District Station/Headquarters and the Waianae Police Substation, 8 miles and 6 miles away from the PVT ISWMF, respectively (Figure 4-7). Between 14 and 17 police officers are typically on duty in the service area. The Waianae Police Station handles about 5,000 to 6,000 911-calls and 500 to 600 arrests in an average month (DPP 2012).

The PVT ISWMF has had no impact on police service. The Project Site is vacant and unlikely to require any responses from the police. Over the past 5 years, there have been two responses made by HPD, one for a trespasser at the PVT ISWMF, and one recently in response to the March 2019 brush fire.

#### 4.5.2.2 Fire Services

Initial response to fires is the responsibility of the CCH's Honolulu Fire Department (HFD). HFD Battalion 4 has two fire stations in the Waianae District, one in Nanakuli and the other in Waianae (Figure 4-7). The Nanakuli Fire Station 28 and the Waianae Fire Station 26 are located 1 mile and 5 miles away from the Project Site, respectively. The Battalion 4 Headquarters at the Kapolei Fire Station 40 is located at 2020 Lauwiliwili Avenue. Backup service is provided by fire stations located in Kapolei, Makakilo, Ewa, and

Waipahu. HFD identified the need for a new fire station in the Maili area, between the Nanakuli and Waianae Fire Stations, in order to meet their Standards of Response Coverage goals (DPP 2012).

Emergency ambulance service is also provided out of the Waianae Fire Station with 1-unit. Patients are taken to the Queen's Medical Center-West Oahu or the Waianae Comprehensive Health Care Facility (DPP 2012).

The *Western Oahu Community Wildfire Protection Plan* by the Hawaii Wildfire Management Organization (HWMO 2016) identifies the Waianae Region as being significantly more vulnerable to wildfire incidents than the rest of Oahu. This is attributed to numerous factors including: steep slopes, rough terrain, strong winds, large percentage of highly ignitable invasive grasses, warm weather, recurring drought conditions, and a history of human-caused fire. The wildfire urban interface areas are of particular concern, due in part to ease of human access, proximity to developed communities, and the expanses of vacant grasslands that provide fuel. Ignition prevention largely is a matter of community outreach and education (HWMO 2016).

HFD has the following equipment available for round-the-clock use and additional resources and equipment are spread across the entire island and are made available when needed if they are not already in use:

- 2 Helicopters: McDonnell-Douglas MD 520N No Tail Rotor (NOTAR®)
- 1 Communications Vehicle
- 43 Fire Engines (500-750 gallons)
- 5 Tractor-Driven Ladder Apparatuses (Tillers)
- 8 Quintuple Combination Pumpers (Quints)
- 2 Towers
- 1 Mobile Command Center
- 1 Prime Mover (Vehicle)
- 2 Rescue Squads
- Other Resources: HAZMAT Response Units; BAMBI Bucket for aerial suppression of wildfires; Live Fire Training Simulator; Mass Decontamination Trailer; and 2x Rescue Boats.

Additional fire response resources are available from the State DLNR, the U.S. Military, and PVT.

### **PVT Emergency Fire Plan**

PVT's SWMP requires implementation of an Emergency Fire Plan and that measures be taken at the facility to minimize surface and subsurface fires (PVT 2016).

PVT ISWMF has minimal combustible material; the primary combustible material is wood and paper products. Though contaminated soil and liquid waste for solidification are accepted, no petroleum-based products (such as gas, oils, and tar) are accepted. The production of methane gas, which is an explosive gas typically generated in MSW landfills, is minimal because the types of waste accepted do not produce large amounts of methane gas during decomposition. PVT ISWMF's landfill does not expect elevated temperatures due to aerobic or anaerobic decomposition because of the inert nature of the C&D waste; thus, no fires are expected from spontaneous combustion. The most probable sources of fire are from on-site equipment or hot loads (i.e., loads with burned or burning debris) (PVT 2016).

PVT is prepared to respond to fires with the following equipment:

- 4 bulldozers
- 7 excavators
- 7 water trucks with capacities of 4,000 gallons
- 5 front-end loaders
- 3 large dump trucks
- 2 large compactors

PVT implements the following policies at the ISWMF to reduce the risk of surface and subsurface fires. These policies would also be implemented at the Project Site.

- **General Policies:** Smoking is not permitted on the landfill or in the recycling and materials recovery area; fire lanes are maintained for material storage areas; roads are maintained for easy entry and exit from the facility; fire extinguishers are provided in all buildings and vehicles at the site for use in extinguishing small fires.
- **Inspection of Landfill and C&D Waste:** Truck loads with smoldering or burning materials are prevented from coming into contact with other combustible material and are rejected by PVT and removed from the ISWMF immediately.
- **Recycling and Materials Recovery Area:** Employees are trained to report fires in the Recycling and Materials Recovery Area. If detected, management is notified, and proper procedures noted in the *Emergency Fire Plan* would be followed.

- **Inspection of Landfill:** The PVT ISWMF has 42 onsite cameras monitoring the facility both visually and using infrared cameras thermally for signs of fire, including on-site camera alarms and security personnel during nighttime hours. Management is notified immediately of surface or subsurface fires.
- **Cover Material:** To minimize oxygen levels in the landfill, a minimum of six inches of interim cover soil is applied whenever the surface area of the working face is approximately one acre or once per week, whichever comes first.
- **Gas Monitoring:** Steel gas probes (10 foot x 2.5 inches) monitoring for temperature and carbon monoxide gas are strategically placed for fire monitoring or where a fire is suspected. Aerial and hand-held infrared cameras can also be used in areas suspected to contain hot spots.
- **Preventative Carbon Dioxide Injection:** As a preventative measure, carbon dioxide is injected into areas that contain buried feedstock material to drive out oxygen. It is also injected through the steel gas probes used for gas monitoring in areas where a subsurface fire may be present.

The PVT ISWMF has had no impact on HFD fire services. If a fire is observed onsite, the main office would be contacted. If it is obviously a major surface fire, CCH fire department services would be contacted immediately via 911. PVT management personnel would be contacted next, the extent of the fire would be determined (i.e., equipment fire, minor surface fire, major surface fire, minor subsurface fire, or major subsurface fire), and proper procedures will be implemented including reporting requirements, as stated in the *Emergency Fire Plan*.

In March 2019, a brush fire burned a large portion of the Project Site. HFD responded with the assistance of PVT. No damage occurred to the PVT ISWMF.

#### 4.5.2.3 Medical Services

The nearest health care facilities to the Project Site include (Figure 4-7):

- The Queen's Medical Center-West Oahu is located 7.7 miles from the Project Site at 91-2141 Fort Weaver Road in Ewa Beach. The facility has emergency services and general medical and surgical services with approximately 135 hospital beds (PBN 2014). New specialty clinics, expansion of the existing general surgery, gastroenterology, cardiology, neurology, and sports medicine services, and addition of orthopedics/spine otolaryngology, and outpatient rehabilitation programs is expected to be completed in 2020 (PBN 2019).
- Kaiser Permanente Nanaieola Clinic is located 0.8 miles southwest of the Project Site at 87-226 Farrington Highway, in Waianae. This facility provides same day service for non-medical emergencies, behavioral health services, diabetes eye exams, diagnostic imaging, family medicine, education, and counseling all in a clinical setting (KP 2019).
- Waianae Comprehensive Health Care Center is located 5.1 miles from the Project Site at 86-260 Farrington Highway, in Waianae. This facility provides primary, emergency, behavioral health, and dental services. In March 2018, construction was completed on the third and final building of a 12-year

improvement project. The new two-story Emergency Medical Services Building significantly increased the size and efficiency of the only 24-hour emergency service available on the Waianae Coast. Future plans include upgrades to the Dental Clinic, new clinic in Nanakuli Village Center (1 mile from Project Site, located on Farrington Highway between Haleakala Avenues and Nanakuli Avenues), and expanded clinics in Kapolei, Ewa, and Waianae Mall (WCCHC 2019).

- In severe cases, a helicopter is dispatched to Waianae to transport patients to the Queen's Medical Center main facility, located at 1301 Punchbowl Street in Honolulu.

Members of the community have voiced the need for a full-service hospital on the Waianae Coast and a second ambulance that operates 24 hours a day (DPP 2012).

PVT provides training and a comprehensive program to ensure the safety of customers and employees. New employees also receive training tailored to their specific work areas. Employees are equipped with personal protective equipment including reflective vests and hard hats.

The PVT ISWMF has had a few employees treated for minor injuries at community emergency facilities.

### **4.5.3 Impacts**

#### **4.5.3.1 Proposed Action**

The Proposed Action would not alter the existing emergency service capabilities. The Proposed Action would relocate existing operations but would not increase the number of personnel or alter the occupational hazards and risks. PVT ISWMF Operations Plan includes a section on Emergency Management Procedures and training. The plan would be updated for the Proposed Action. Specific procedures would be updated to address different types of emergencies, including medical emergencies, fires on and off the Project Site, spills, bomb threats, natural disasters, and general emergencies. The procedures address preparatory activities, response procedures, personnel evacuation procedures, and recovery activities.

The PVT protocols and procedures have been successful in prevention and response to emergency incidents. The training and protocols are updated as needed to address near misses or other emerging health and safety issues. PVT provides training that is designed to be accessible to all employees, regardless of literacy or language skills.

#### **Police Services**

The Proposed Action would include security infrastructure (e.g., perimeter fencing, controlled access), video surveillance, and security guard presence during and after operation hours. Therefore, no short- or long-term, direct or indirect impacts on emergency police services are expected from the Proposed Action.

#### **Fire Services**

There are short- and long-term, direct and indirect beneficial impacts anticipated on emergency fire services with the Proposed Action. Section 2.5.6.5, *Fire Protection* and Section 2.5.7, *Operational Plans and*



*Controls*, summarizes the proposed fire prevention and response measures planned for the Project Site. PVT has successfully relied on these practices at the PVT ISWMF for over 25 years. The *Fire Protection Plan* is included in the *Operations Plan* and would be updated to include the Project Site. The HFD responds to structural or brush fires, and PVT responds to landfill fires. Fire department access roads would be constructed in accordance with applicable National Fire Protection Association regulations. PVT would install self-contained, pressurized fire sprinkler systems in the office trailers or equivalent systems and would submit civil drawings to HFD for approvals if necessary.

Under the Proposed Action, the risk of wildfire at the Project Site would be reduced resulting in a beneficial long-term direct impact on HFD services. The Proposed Action would control access to the site and remove the scrub vegetation that fuels brushfires. Fire suppression equipment (e.g. water trucks) would be retained onsite. Interior perimeter roads would give HFD access to brushfires on the perimeter of the Project Site.

### **Medical Services**

There would be no short-, long-term, direct or indirect impacts on medical services from the Proposed Action. The Proposed Action would not increase the demand for medical services in the community. PVT employees and operations would relocate to the Project Site and implement the same PVT *Employee Safety Plan*, to be updated for the Proposed Action.

#### **4.5.3.2 No Action Alternative**

Under the No Action Alternative, there would be no development at the Project Site, and the wildfire hazard risk would be unchanged. There would be a less than significant adverse impact on HFD's ability to fight wildfires because PVT would no longer maintain fire access roads on the Project Site. There would be no impact on other community emergency services.

PVT currently allows HFD to use parts of the Project Site for brush fire training purposes. This would no longer be possible under the No Action Alternative because access roads would not be maintained.

The existing PVT ISWMF would be closed when it reaches capacity and safely managed in accordance with the HDOH-approved plans (HDOH 2018a) (Section 2.4.5, *Closure of the PVT ISWMF C&D*).

#### **4.5.4 Summary of Impacts and Potential Mitigation**

The Proposed Action would implement the PVT Emergency Management Procedures mitigating any adverse impact. The development of the Project Site would reduce the wildfire risk and potential indirect impact to the community. This would be a short-term and long-term, direct and indirect beneficial impact on fire protection and HFD services. The No Action Alternative would result in less than significant adverse change to HFD services because PVT would no longer maintain fire access roads on the Project Site.

**Table 4-14 Emergency Services Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Demand on HPD Police Service	0	0	0	0	none	0	0
Demand on HFD Fire Service	+	+	+	+	none	<	<
Demand on Medical Service	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 4.6 Community Facilities

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on community facilities, including schools and libraries, parks and recreational facilities, community centers, and churches.

### 4.6.1 Methodology

The community facilities in the vicinity were mapped and described. The existing conditions and potential impacts were assessed based on the PVT ISWMF use of these services.

### 4.6.2 Existing Conditions

The PVT ISWMF has had no impact on community facilities. There are no schools, libraries, parks, recreational facilities, community centers, or churches on or adjacent to the Project Site (Figure 4-8). PVT's contribution to community recreation, education, and civic organizations is discussed in Section 5.3, *Socioeconomic Resources and Land Use Characteristics*.

The project area is located within the Leeward Oahu School District, which currently contains 10 public schools operated under the State Department of Education (DOE). There are six elementary schools, one intermediate, one combined intermediate and high school, and one high school. DOE schools within the Nanakuli area include Nanakuli Elementary, Nanaikapono Elementary School, and Nanakuli Intermediate and High School (Figure 4-8). In addition to these public schools, Nanakuli has one charter school, Ka Waihona o ka Naauao located at 89-195 Farrington Highway.

Schools designated as emergency shelters within the general vicinity of the Project Site are listed in Table 4-15 (DPP 2012).

**Table 4-15 Designated Emergency Shelter Schools in the Vicinity of the Project Site**

School	Address	Distance from Project Site	Direction from Project Site
Nanakuli Elementary School	89-778 Haleakala Avenue	2,310 feet (0.4 mile)	Southeast
Nanakuli Intermediate and High School	89-980 Nanakuli Avenue	2,900 feet (0.6 mile)	Southeast
Ka Waihona o ka Naauao	89-195 Farrington Highway	1,580 feet (0.3 mile)	Southeast
Maili Elementary School	97-360 Kulaaupuni Street	11,400 feet (2.2 miles)	Northwest

Source: DPP 2012.

Parks and recreational areas are primarily located to the southwest of the Project Site across Farrington Highway, and include the Ulehawa Beach Park and the Nanakuli Beach Park. The closest beach is Ulehawa Beach Park located approximately 2,000 feet southwest of the Project Site (Figure 4-8). The beach parks support subsistence fishing, surfing, swimming, picnicking, skin diving, boating, and related uses.

Several youth facilities such as NFL YET Hawaii Nanakuli Clubhouse for the youth of Nanakuli and the Boys and Girls Club Teen Center are located adjacent to the Nanaikapono Elementary School.

Various churches and religious organizations such as the Samoan Church of Hawaii LMS, First Baptist Church of Nanakuli, and Nanakuli Door of Faith Mission Church are also located within one mile of the Project Site. Figure 6-3 includes general locations and types of facilities (e.g. WWTP, Police and Fire Stations, High Schools, Small Boat Harbor, and the PVT ISWMF) in the Nanakuli area, as identified in the WSCP (DPP 2012).

MA'O Organic Farms is located within ¼ mile of the Project Site. MA'O Organic Farms operates an organic farm that supplies fresh produce to Oahu and the Waianae/Nanakuli Community and serves hundreds of school-aged and post-secondary youth through their internship and Farm 2 Fork programs.

### **4.6.3 Impacts**

#### **4.6.3.1 Proposed Action**

The Proposed Action would have no short- or long-term, direct or indirect impacts on the ability of community facilities to serve the population. The Proposed Action would not increase or induce a population increase that would increase the demand on community facilities.

The CCH Department of Parks and Recreation and Department of Community Services indicated that the Proposed Action would have no adverse impact on their respective facilities or programs (Section 10, *Draft EIS Comments and Responses*).

#### **4.6.3.2 No Action Alternative**

Under the No Action Alternative, the Proposed Site would remain vacant, and there would be no direct or indirect impact on community facilities.

#### 4.6.4 Summary of Impacts and Potential Mitigation

The Proposed Action and the No Action Alternative would have no short- or long-term, direct or indirect impacts on community facilities.

**Table 4-16 Community Facilities Impact Summary**

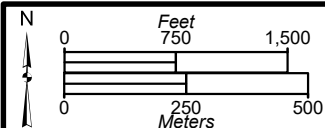
Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Community Facilities	0	0	0	0	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact

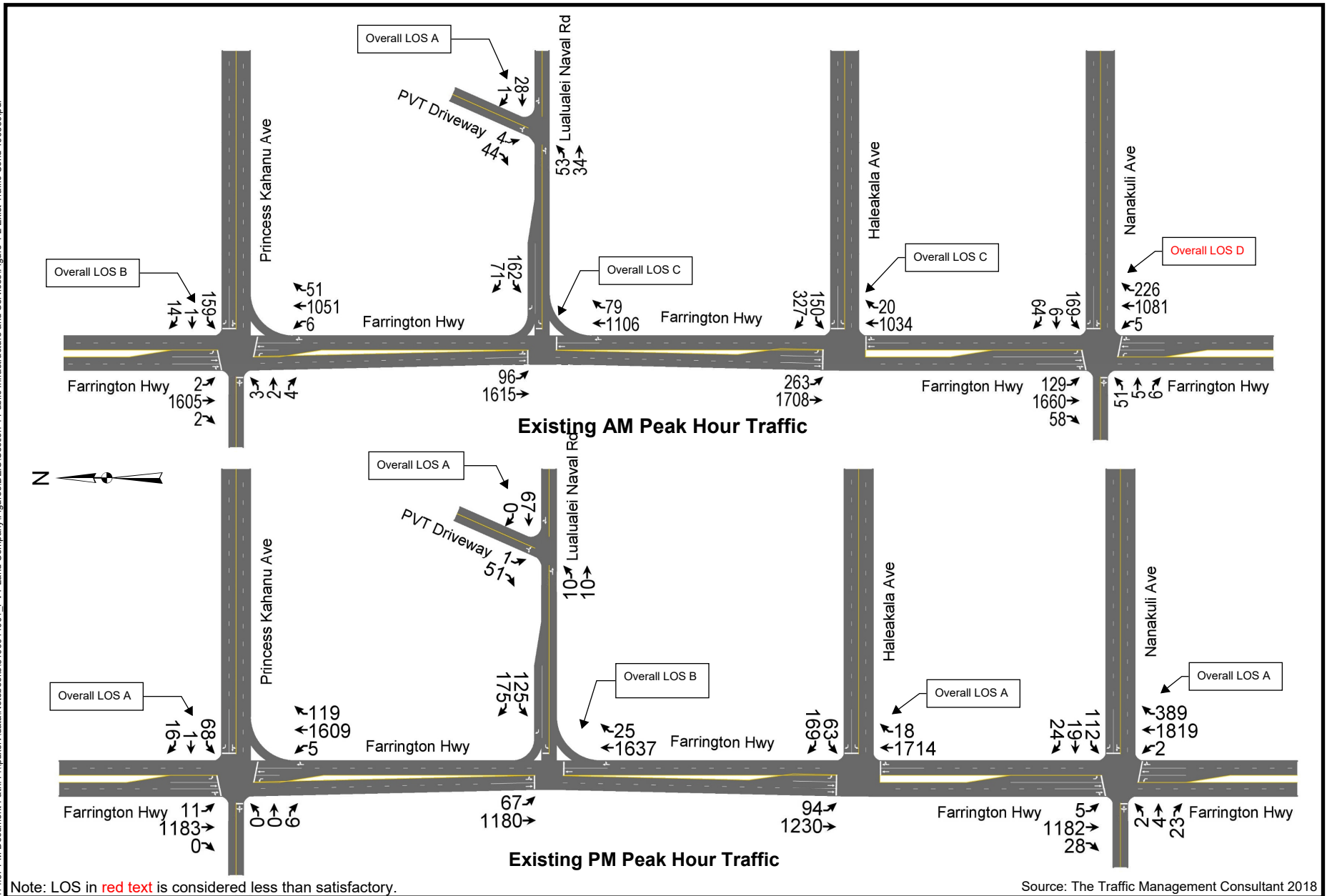
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

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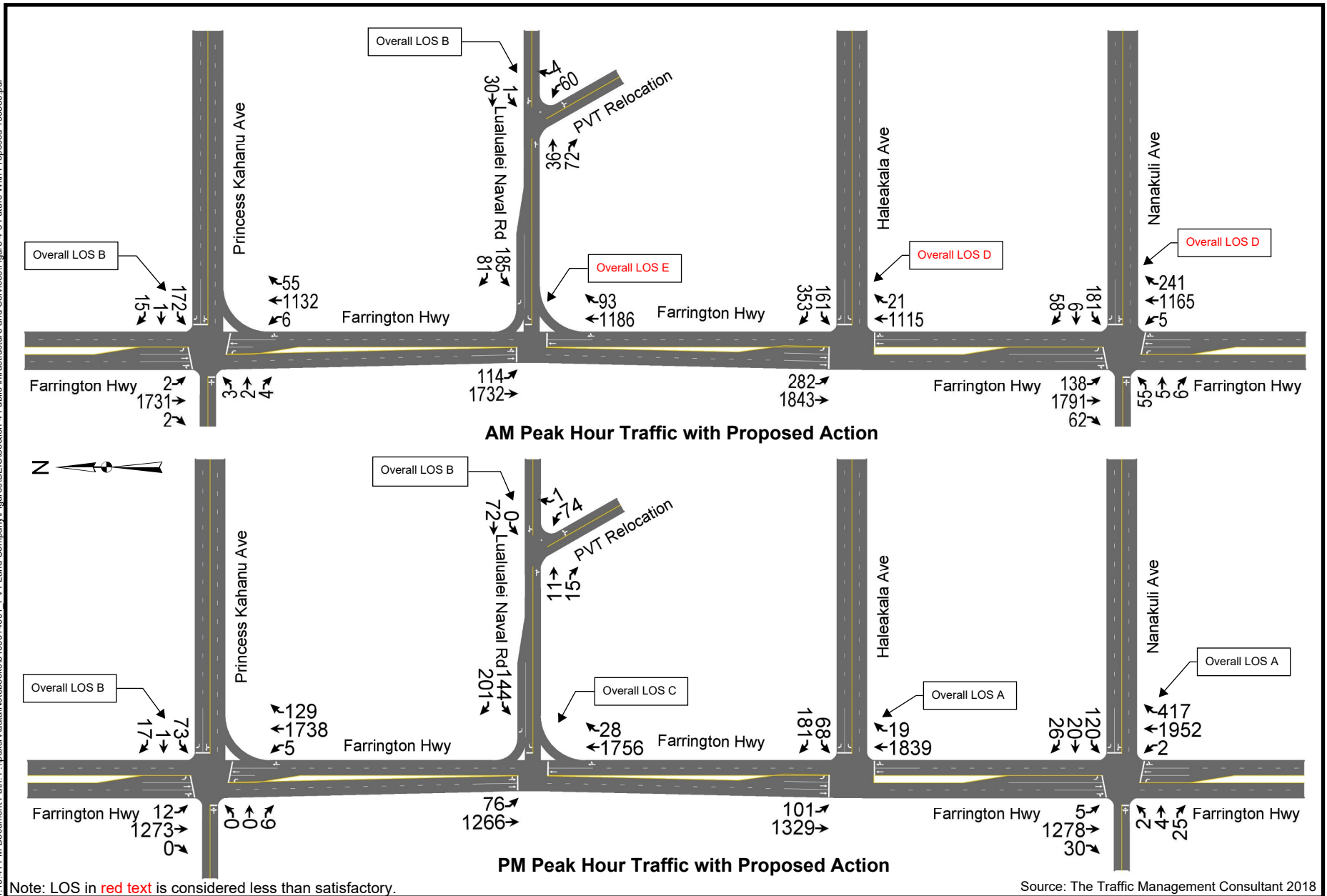




**Existing Traffic Conditions**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

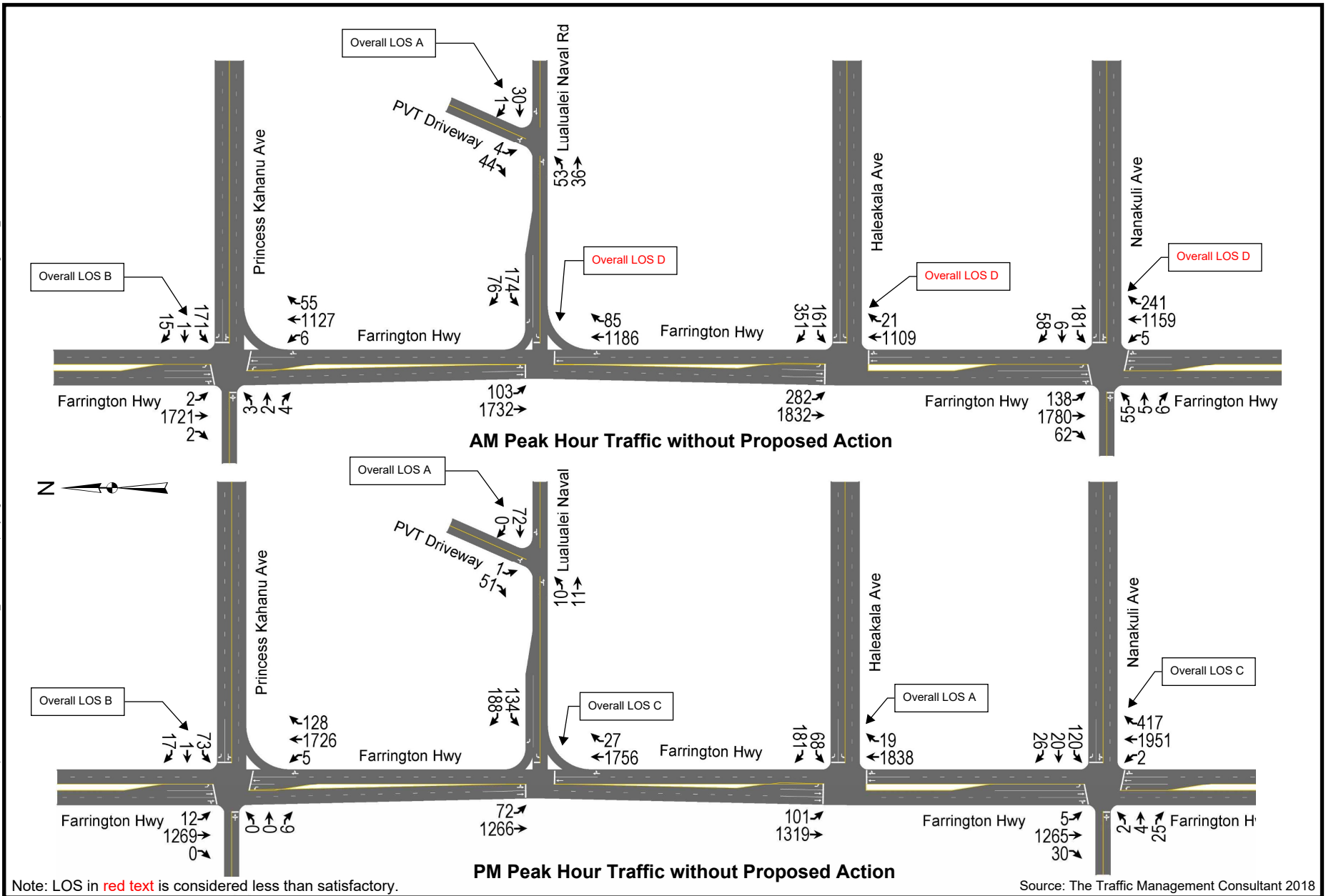
**Figure 4-2**





**Future Traffic with Proposed Action**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

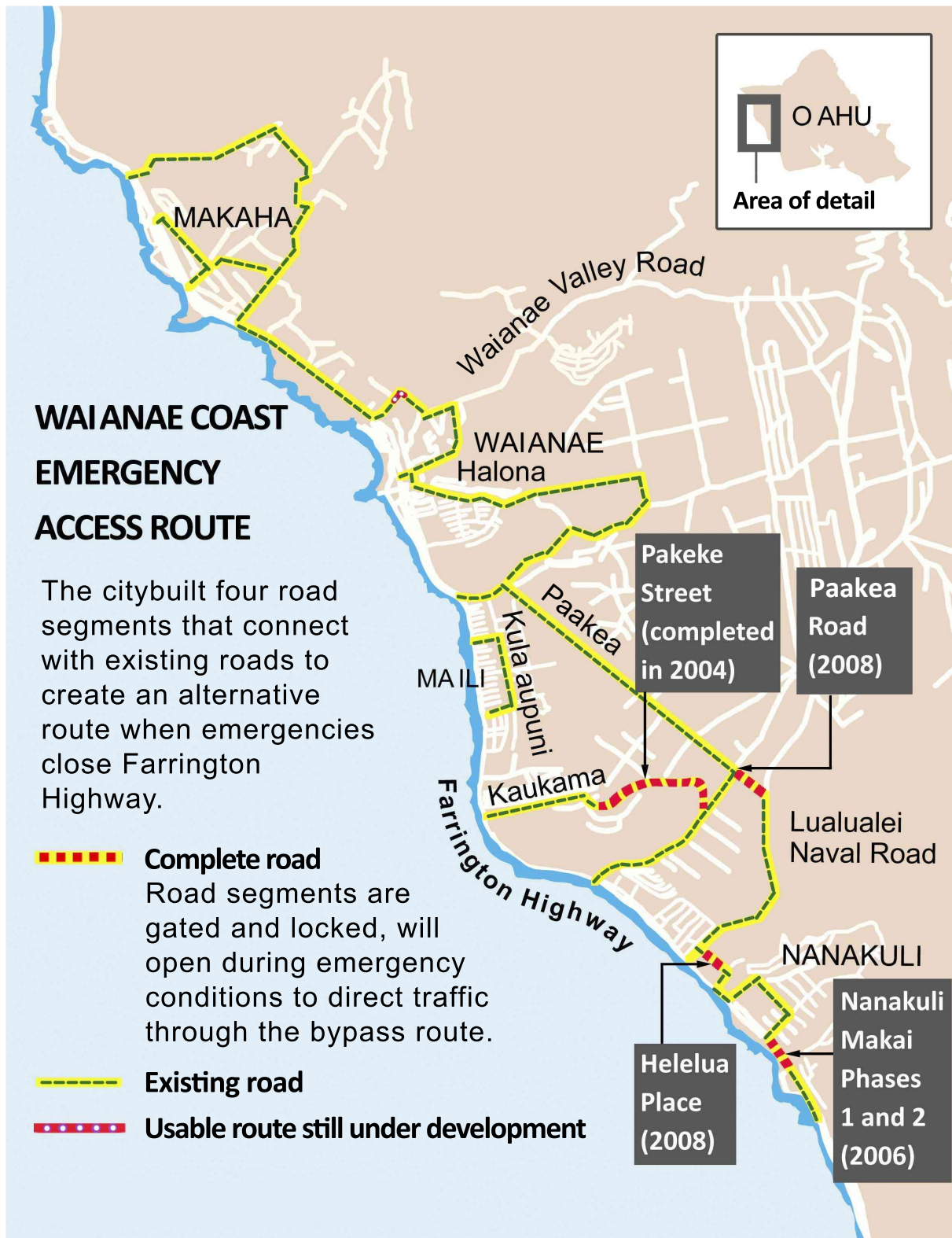
Figure  
**4-3**



### Future Traffic Without Proposed Action

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
4-4

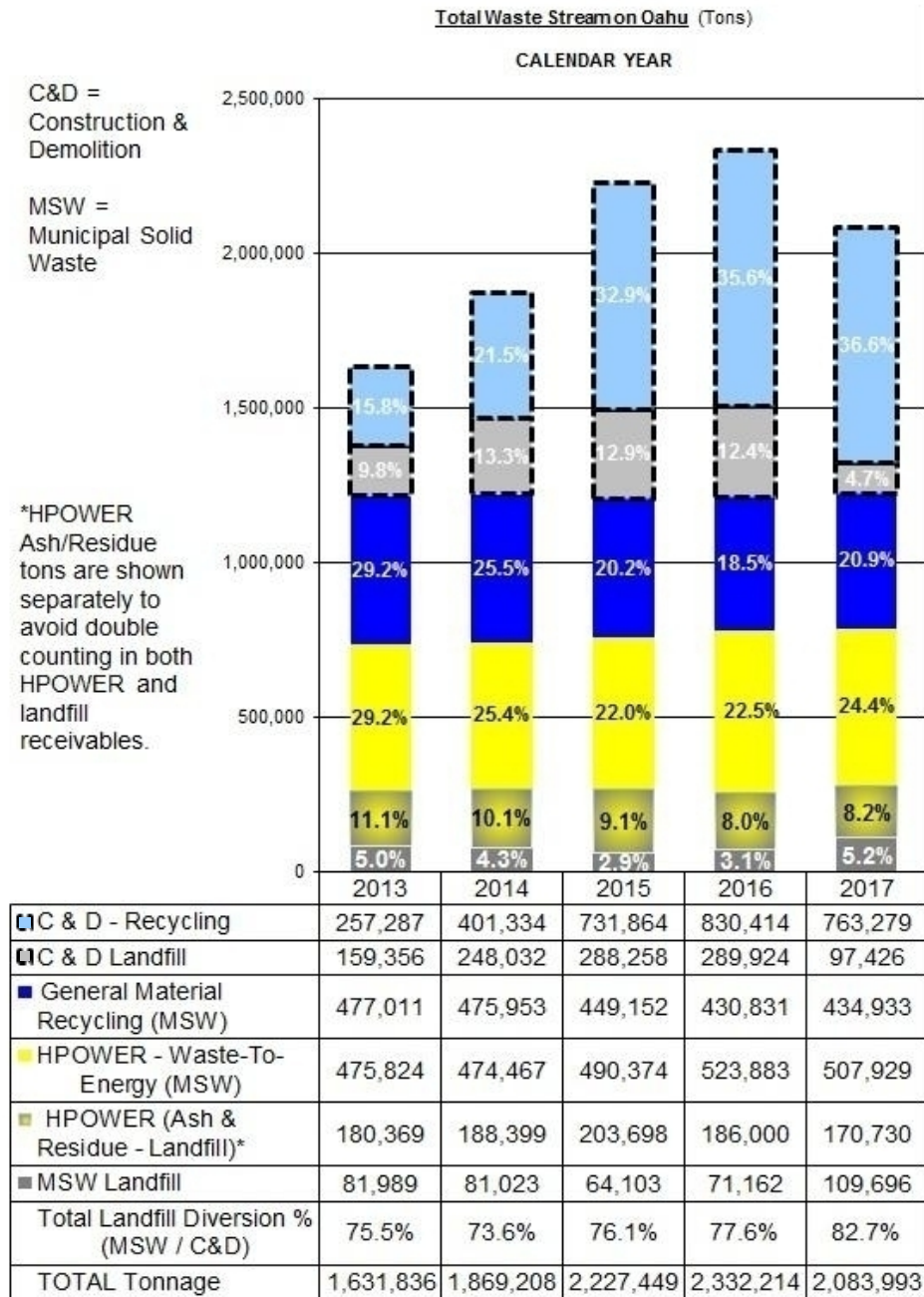


Source: CCH 2009, Star Advertiser 2009

## Waianae Coast Emergency Access Route

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
4-5



Source: ENV 2018

**Total Waste Stream on Oahu**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**4-6**





**Emergency Services**  
 PVT ISWMF Relocation  
 Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**4-7**



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## 5 HISTORIC, SOCIOECONOMIC, AND SCENIC RESOURCES

### Section Contents

5.1	Archaeological and Historical Resources.....	5-13
5.2	Cultural Resources.....	5-26
5.3	Socioeconomic Resources and Land Use Characteristics.....	5-34
5.4	Scenic Resources .....	5-60

The following revisions were made to Section 5 in the Final EIS in response to the Draft EIS comments.

<u>Section</u>	<u>Page</u>	<u>Revisions</u>
5.2.2.3	5-31	■ <del>┘</del> Kukui Maunakea- <b>Forth</b> , Representative of <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> . Interview.
5.2.2.3	5-32	Interviewee Kukui Maunakea-Forth of <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> voiced a concern about potential impacts to cultural resources, practices, and beliefs. Mrs. Maunakea-Forth identified potential cultural resources within the vicinity of the Project Site, including: ephemeral ponds and streams from upland springs, loi kalo (taro) terraces located on the southeastern side of Ulehawa Stream, and pohaku (rocks) that are suitable for stone masonry. Additionally, Kukui Maunakea-Forth identified culturally significant sites or wahi pana in the vicinity of the project area: Puu Heleakala and Ka Olae (the 236-acre parcel recently acquired by <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> ). She is concerned about potential impacts of the Proposed Action on <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> future farming operations north of the Project Site. No cultural beliefs were identified in connection to the Project Site.
5.2.2.4	5-33	The upper valleys and coastal areas of Lualualei were identified as areas of subsistence gathering and agriculture. <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> currently cultivates approximately 23 acres within Lualualei Ahupuaa and intends to expand their farming operations to the parcel adjacent and north of the Project Site (Figure 5-9). They intend to cultivate traditional and non-traditional crops.
5.2.3.1	5-33	Farming will occur in the vicinity of the Project Site. <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> expressed concern that the Proposed Action will have an adverse impact on their future farming activity north of the Project Site. The <del>MAO Organic Farms</del> <b>MA'O Organic Farms</b> parcel is upwind and upgradient of the Project Site.
5.3.2.4	5-44	■ Puu Heleakala Community Association Presentation on March 26, 2019.

	<ul style="list-style-type: none"><li>■ <u><b>Nanakuli-Maili Neighborhood Board presentation on July 16, 2019.</b></u></li><li>■ <u><b>The August 20, 2019 Nanakuli Neighborhood Board Meeting and September 4, 2019 Special Meeting with testimony from 70+ individuals and organizations, both in favor of and in opposition to the Proposed Action. The Board voted 5-3 to accept the following resolution: The Board supports PVT’s efforts in their recycling efforts and service to our community, however, the NB#36 opposes their request for relocation, as stated in their Draft EIS statement and urges entities, especially, City, State and Federal governments to assist PVT in their efforts to find a suitable location as they help our State achieve a zero waste society.</b></u></li></ul> <p>Community feedback during the EIS outreach included appreciation for and acknowledgement of PVT’s:</p> <ul style="list-style-type: none"><li>■ Public outreach efforts.</li><li>■ <u><b>High standards for waste management.</b></u></li><li>■ Renewable energy and waste diversion practices.</li><li>■ Community support <u><b>and scholarship program.</b></u></li><li>■ <u><b>Providing high quality jobs for west side residents.</b></u></li><li>■ Zero-tolerance for haul truck speeding on Lualualei Naval Road.</li></ul> <p><u><b>Key concerns expressed by the community are listed in Table 5-10.</b></u></p> <p><b>Table 5-10 Key Concerns and Mitigation Measures</b></p> <table><tr><th><u><b>Concern</b></u></th><th><u><b>Relevant EIS Section</b></u></th><th><u><b>Summary of Mitigation Measures</b></u></th></tr><tr><td><u><b>The inequitable burden placed on the economically disadvantaged Waianae population relative to other communities for hosting undesirable land uses that benefit all of Oahu.</b></u></td><td><u><b>Section 5.3, Socioeconomic and Land Use Characteristics</b></u></td><td><u><b>N/A</b></u></td></tr></table>	<u><b>Concern</b></u>	<u><b>Relevant EIS Section</b></u>	<u><b>Summary of Mitigation Measures</b></u>	<u><b>The inequitable burden placed on the economically disadvantaged Waianae population relative to other communities for hosting undesirable land uses that benefit all of Oahu.</b></u>	<u><b>Section 5.3, Socioeconomic and Land Use Characteristics</b></u>	<u><b>N/A</b></u>
<u><b>Concern</b></u>	<u><b>Relevant EIS Section</b></u>	<u><b>Summary of Mitigation Measures</b></u>					
<u><b>The inequitable burden placed on the economically disadvantaged Waianae population relative to other communities for hosting undesirable land uses that benefit all of Oahu.</b></u>	<u><b>Section 5.3, Socioeconomic and Land Use Characteristics</b></u>	<u><b>N/A</b></u>					

		<p><u>Proximity of landfill to residential and commercial areas.</u></p>	<p><u>Section 2.5.2.2, Setbacks and Section 6.3.2.3, LUO Article 5, Specific Use Development Standards</u></p>	<p><u>PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the CCH LUO (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's SWMP. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.</u></p> <p><u>Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures have been proven to be effective at the PVT ISWMF.</u></p>
		<p><u>Effects of fugitive dust on the health of the community.</u></p>	<p><u>Section 3.5, Air Quality</u></p>	<p><u>PVT would implement dust control measures to minimize fugitive dust, including but not limited to:</u></p> <ul style="list-style-type: none"> <li>▪ <u>pave and regularly clean permanent access and haul roads;</u></li> <li>▪ <u>apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;</u></li> <li>▪ <u>apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;</u></li> <li>▪ <u>landscape closed portions of the landfill area;</u></li> <li>▪ <u>apply soil cement to unused portions of the landfill area;</u></li> </ul>

				<ul style="list-style-type: none"> <li>▪ <u>maintain a 750-foot buffer zone along the southern property boundary;</u></li> <li>▪ <u>install a dust screen along the southern property boundary;</u></li> <li>▪ <u>maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;</u></li> <li>▪ <u>install and maintain a wheel wash to clean the tires of trucks leaving the site; and</u></li> <li>▪ <u>periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.</u></li> </ul>
		<p><u>Concern about the types of waste accepted by PVT (e.g. asbestos, hazardous waste)</u></p>	<p><u>Section 2.4.1, PVT ISWMF Materials Acceptance and Disposal</u></p>	<p><u>PVT does not accept hazardous wastes, as defined by State and Federal regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's SWMP and applicable State and Federal laws. No ACM disposal area is proposed for the Project Site.</u></p>
		<p><u>Obstruction of culturally-significant view planes and impacts to cultural landforms.</u></p>	<p><u>Section 5.2, Cultural Resources and Section 5.4, Scenic Resources</u></p>	<p><u>Mitigation measures to minimize and avoid impacts to the visual character of the community include the following:</u></p> <ul style="list-style-type: none"> <li>▪ <u>The maximum landfill grades would be limited to 255 feet amsl located in the northeastern portion of the Project Site</u></li> <li>▪ <u>Preserve views toward Hina's Cave from the surrounding area.</u></li> </ul>

				<ul style="list-style-type: none"> <li>▪ <u>Prior to the first landfill cell development, a 15 to 25 foot “grassed shield berm” would be created along the edge of the cell to shield the debris disposal activities from the community’s view.</u></li> <li>▪ <u>A Landscaping Plan (Appendix I) will be implemented, including grassed berms, green dust screen, and 25-foot-tall trees along the perimeter.</u></li> <li>▪ <u>The debris management operations (e.g., MRD-2 and MRD-3, renewable energy facilities) have intentionally been sited north on the Project Site, away from the residential land uses south of the Project Site.</u></li> <li>▪ <u>The facilities sited at the southern end (e.g., office trailers, weigh station), would have a low profile.</u></li> <li>▪ <u>The increases in height would be incremental over 30 years.</u></li> <li>▪ <u>The planned PV system would be designed to maximize efficiency and minimize potential for glint and glare visual impacts.</u></li> <li>▪ <u>The amount of bare soil exposed at one time would be kept to a minimum. Slopes of the filled landfill cells would be seeded with fast-growing grass as soon as practicable.</u></li> <li>▪ <u>The Proposed Action would operate during daytime hours only. The minimal</u></li> </ul>
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				<u>lighting onsite will be directed downward and/or shielded.</u>
		<u>Protection of Lualualei's ground and surface water quality.</u>	<u>Section 3.4, Water Resources</u>	<p><u>PVT operations would minimize the volume of leachate (Section 2.5.3.1, Leachate Management). Leachate would be managed and retained onsite through a LCRS.</u></p> <p><u>The impermeable liner (described in Section 2.5.3.2, Landfill Liner) would be installed beneath the landfill waste layer to prevent leachate from entering the soil and groundwater below.</u></p> <p><u>Groundwater and leachate would be tested regularly per PVT's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's SWMP.</u></p> <p><u>The stormwater management system (Section 2.5.3.3, Stormwater Management [Site-wide]) would divert stormwater away from the active landfill cells and around the perimeter of the landfill. BMPs for erosion control and stormwater management protocols would minimize sediment and pollutants in stormwater runoff. PVT will test stormwater discharge per their revised NPDES permit.</u></p>
		<u>Lack of alternative locations retained in the EIS.</u>	<u>Section 2.7, Alternatives to the Proposed Action</u>	<u>N/A</u>
		<u>Loss of open space and agricultural land.</u>	<u>Section 5.3, Socioeconomic and Land Use</u>	<u>No permanent or multistory buildings are proposed. The operations would be generally</u>

			<p><u>Characteristics and Section 6.2.2.7, Agricultural Productivity Ratings</u></p>	<p><u>shielded from public view by topography, landscaping, fencing, and berms covered in vegetation (See visual mitigation measures above).</u></p> <p><u>In the long-term, when the Proposed Action reaches permitted capacity and is closed, the open space character of the Project Site would be restored. Operational facilities, equipment and office trailers would be removed. The reuse development potential would be limited to structures with shallow footing (one story). Therefore, rural open space character will be preserved for future generations.</u></p> <p><u>Section 6.2.2.7, Agricultural Productivity Ratings discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing.</u></p>
		<p><u>Negative impacts to surrounding agricultural uses.</u></p>	<p><u>Section 5.3, Socioeconomic Resources and Land Use Characteristic</u></p>	<p><u>Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures have been proven to be effective at the PVT ISWMF.</u></p>
		<p><u>Speeding truck drivers and the maintenance of</u></p>	<p><u>Section 4.1, Transportation</u></p>	<p><u>PVT does not propose to increase their permitted limit of up to 300 waste haul trucks per day. PVT policies include the following</u></p>

		<u><b>Lualualei Naval Road.</b></u>		<p><u><b>measures to minimize traffic impacts to the community:</b></u></p> <ul style="list-style-type: none"> <li>▪ <u><b>Adhere to the operating hours (Section 2.5.8, Hours of Operation).</b></u></li> <li>▪ <u><b>No early arrivals. Repeat offenses would result in revoking the driver's access privileges.</b></u></li> <li>▪ <u><b>Turn off diesel engines while waiting in line to minimize the noise and diesel odor emissions.</b></u></li> <li>▪ <u><b>Adhere to posted speed limits both on- and off-site.</b></u></li> <li>▪ <u><b>Encourages community members to call their office to report speeding trucks. PVT penalizes speeding drivers and will suspend repeat offenders from the site, if necessary.</b></u></li> <li>▪ <u><b>Coordinate with the Navy to maintain and repair Lualualei Naval Road.</b></u></li> </ul>
		<u><b>Impacts to native fauna and flora.</b></u>	<u><b>Section 3.7, Biological Surveys</b></u>	<p><u><b>Although it is improbable that the Project Site habitat could be used for Short-eared Owls nesting, a qualified biologist will conduct a nesting Short-eared Owl survey of the Project Site immediately prior to clearing and grading.</b></u></p> <p><u><b>The Proposed Action would only operate during daytime hours and no nighttime construction is anticipated. However, if night lighting is required, PVT would shield all lights and/or place lights high enough to be pointed directly at the ground to minimize impacts to nocturnally flying seabirds.</b></u></p>

		<p><b><u>Excess Noise.</u></b></p>	<p><b><u>Section 3.6, Noise</u></b></p>	<p><b><u>PVT's policies to minimize noise impacts would include the following:</u></b></p> <ul style="list-style-type: none"> <li>▪ <b><u>Require all site-owned and customer-owned vehicles traveling internally on the site to be operating with fully functional mufflers and in a state of good repair.</u></b></li> <li>▪ <b><u>Encourage quiet operating techniques and practices.</u></b></li> <li>▪ <b><u>Maintain the commonly traveled roads to keep a smooth evenly sloped surface free from major bumps and potholes that cause noise when traveled over.</u></b></li> <li>▪ <b><u>Grade all roads at a low enough slope that they do not require excessive throttle to navigate.</u></b></li> <li>▪ <b><u>Post signage to inform drivers of "no engine braking" and "no horn unless emergency" areas close to noise critical areas.</u></b></li> </ul>
		<p>Key concerns expressed by the community include:</p> <ul style="list-style-type: none"> <li>■— Loss of open space and rural landscape.</li> <li>■— The inequitable burden placed on the economically disadvantaged Waianae population relative to other communities for hosting undesirable land uses that benefit all of Oahu.</li> <li>■— Effects of fugitive dust on the health of the community.</li> <li>■— Obstruction of culturally significant view planes.</li> <li>■— Protection of Lualualei's ground and surface water quality.</li> <li>■— Speeding truck drivers and the maintenance of Lualualei Naval Road.</li> </ul>		

		Section 5.3.3, <i>Impacts</i> addresses socioeconomic concerns. Concerns related to fugitive dust, leachate, stormwater, traffic, and visual impacts are addressed in other sections of this EIS.
5.3.2.5	5-50	<ul style="list-style-type: none"> <li>Further north, beyond the Puu Heleakala slopes, is a 263-acre parcel formerly owned by Tropic Land, LLC and currently owned by MAO Farms <b><u>MA'O Organic Farms</u></b> (TMK: 8-7-009:002). Beyond this is the Lualualei Annex.</li> </ul>
5.3.2.5	5-53	<p><b><u>In addition to the land uses described above, there are six DHHL-owned parcels in the vicinity of the Project Site (Figure 5-11):</u></b></p> <ul style="list-style-type: none"> <li>■ <b><u>Princess Kahanu Estates</u></b></li> <li>■ <b><u>Nanakuli Hawaiian Homestead</u></b></li> <li>■ <b><u>Nanakuli Upper Valley</u></b></li> <li>■ <b><u>Nanakuli Village Center</u></b></li> <li>■ <b><u>Former Nanaikapono School Site</u></b></li> <li>■ <b><u>Nanakuli Ranch</u></b></li> </ul>
5.3.2.5	5-54	<p><b>Planned Land Use</b></p> <p>Six of the eight projects would be adjacent, in part, to the Project Site. Nanakuli Village Center (#3) and the Leeward Bikeway (#4) would not be adjacent to the Project Site (Figure 5-9)</p> <p><b><u>Four of the projects are priority projects in DHHL's The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nanakuli (2009): Nanakuli Village Center (#3), Street Repairs and Maintenance for Health and Safety in the Region (#9), Farrington Highway Transportation Corridor Coordination and Improvements (#10), Cemetery Repair and Expansion (#11), and Identify and Plan Community Use Areas (#12).</u></b></p>
5.3.2.5	5-54	Two residential developments (Project #1 and #7) are proposed south of the Project Site. MAO Farms <b><u>MA'O Organic Farms</u></b> (Project #8) proposes agricultural use of the former Tropic Lands, LLC parcel, located north of the Project Site. The land has been acquired and MAO Farms <b><u>MA'O Organic Farms</u></b> representatives were interviewed in the CIA (Section 5.2, <i>Cultural Resources</i> ).

5.3.2.5

5-56

Table 5-11 Planned Land Use Changes

#	Project Name and Description	Type	Status	Proponent
8	MAO Farms <u><b>MA'O Organic Farms</b></u> representatives presented plans to expand their farming operations to the former Tropic Lands, LLC parcel (TMK: 8-7-009:002). <sup>7,8</sup> <u><b>MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and plans to develop the parcel into a working farm and affordable, farm-worker housing project.</b></u>	Agriculture	Land acquired.	MAO Farms <u><b>MA'O Organic Farms</b></u>
9	<u><b>Street Repairs and Maintenance for Health and Safety in the Region<sup>9</sup>. Improvements to crosswalks, sidewalks and other measures to improve pedestrian safety within DHHL homesteads and along Farrington Highway.</b></u>	<u><b>Transportation</b></u>	<u><b>In progress.</b></u>	<u><b>DHHL</b></u>
10	<u><b>Farrington Highway Transportation Corridor Coordination and Improvements<sup>9</sup>. DHHL coordination of ongoing Farrington Highway corridor improvements.</b></u>	<u><b>Transportation</b></u>	<u><b>In progress.</b></u>	<u><b>DHHL</b></u>
11	<u><b>Cemetery Repair and Expansion<sup>9</sup>. Planning and development of the new site for the Nanakuli Cemetery.</b></u>	<u><b>Community</b></u>	<u><b>In progress.</b></u>	<u><b>DHHL</b></u>



		<p><b>12</b> <u><b>Identify and Plan Community Use Areas<sup>9</sup>.</b></u> <u><b>Planning to identify community use areas.</b></u></p> <p>Sources: 1) Nanakuli-Mailii Neighborhood Board 2018. 2) KITV 4 2016. 3) Hawaii Community Development Board 2018. 4) Hawaii Bicycling League 2018. 5) KITV 4 2017. 6) CCH 2019b. 7) Nanakuli-Mailii Neighborhood Board 2019. 8) CSH 2019. <u><b>9) DHHL 2009.</b></u></p>	<u><b>Community</b></u>	<u><b>In progress.</b></u>	<u><b>DHHL</b></u>
5.3.3.1	5-58	<p>The Proposed Action would have no short- or long-term, direct or indirect impact on the planned land use changes identified in Table 5-11 and shown on Figure 5-9. The Proposed Action would be compatible with adjacent <u><b>current</b></u> and future land uses <u><b>in the vicinity of the Project Site</b></u> and is not expected to encourage or discourage changes in land use in the Waianae Region. Anticipated changes in land use will occur with the development of the projects planned by various public and private agencies (Table 5-11).</p>			
5.4.3.1	5-64	<p>■ A <del>Conceptual Landscaping Layout</del> <u><b>Landscaping Plan</b></u> (Appendix I) for the Proposed Action will be implemented, including grassed berms, green dust screen, and 25-foot-tall trees along the perimeter.</p>			

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## 5.1 Archaeological and Historical Resources

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on archaeological and historic resources.

### 5.1.1 Methodology

*An Archaeological Literature Review and Field Inspection Report for the PVT Integrated Solid Waste Management Facility Relocation Project, Lualualei Ahupuaa, Waianae District, Oahu TMK: [1] 8-7-009:007 (2018)* was prepared by CSH, included in Appendix G (CSH 2018).

CSH completed the following tasks in their assessment of existing conditions and potential impacts to historic resources:

1. Research the historical, cultural, and archaeological background.
2. Assess the historic context of the area based on the background research to predict the types of historic properties likely to be encountered.
3. Review previous Archaeological Inventory Surveys (AIS) and SHPD correspondence regarding the Project Site and the three historic properties identified.
4. Conduct fieldwork to locate the three previously identified historic properties relevant to the Project Site and describe their 2018 condition.
5. Assess the Proposed Action's potential impacts to the three historic properties and make recommendations regarding the applicability of the previous SHPD determinations.

*The Archaeological Literature Review and Field Inspection Report* satisfies the requirement for consultation/documentation to determine appropriate further archaeological study and mitigation (if any).

### 5.1.2 Existing Conditions

Archaeology is the study of past cultures through the material (physical) remains people left behind. Features are remains that cannot be moved (e.g., large buildings, post holes), while artifacts are smaller, portable objects. Archaeologists use these remains to understand and recreate all aspects of past culture and preserve our shared human heritage.

#### 5.1.2.1 Traditional Accounts and Mythology

The Waianae Coast and inland interior are important centers of Hawaiian legend and mythology. Traditional accounts of Lualualei focus on the mischievous adventures of the demi-god Maui. Section 5.2.2.1, *Traditional Cultural Property or Place* provides more information on the legends of Maui as it relates to Lualualei (CSH 2018).

There are two traditional accounts or meanings given to the name Lualualei. One meaning, "flexible wreath," is attributed to a battle formation used by Mailikukahi against four invading armies in the battle of Kipapa in the early fifteenth century (CSH 2018). A second, and perhaps more recent meaning, is "beloved one spared." This meaning relates to a story of a relative who

was suspected of wearing the king's malo (loincloth). A third meaning of the name Lualualei is an older reference to one of Maui's sisters, who went by the same name.

### **5.1.2.2 Historical Context of Lualualei**

This section provides a general history of Lualualei from western contact to present.

#### **Western Contact**

The earliest reported Western contact was the sailing of Captain James Cook and Captain George Vancouver. In January 1778, Captain James Cook sighted Waianae from a distance, but chose to continue his journey and landed off Waimea, Kauai instead. Fifteen years later, Captain George Vancouver approached the Waianae coast and stated in his log that the entire coast was "one barren rocky waste, nearly destitute of verdure, cultivation or inhabitants" (CSH 2018). Vancouver did not anchor at Waianae.

By 1811, sandalwood merchants began actively exploiting the Hawaii market and huge amounts of sandalwood were exported to China. Traditionally, Hawaiians used sandalwood for medicinal purposes and as a scent to perfume their kapa. Kamehameha I and a few other chiefs controlled the bulk of the sandalwood trade. The chiefs accrued massive debts in an effort to acquire western goods, ships, guns, and ammunition. These debts were paid off in shiploads of sandalwood. The sandalwood era was short-lived and by 1829, the majority of the sandalwood trees had been harvested and trading could no longer be sustained. It is unclear how extensive Lualualei's sandalwood resources had been; however, the effects of the sandalwood harvest, the population shifts, and disruption of traditional lifestyles and subsistence patterns would undoubtedly have affected the population of Lualualei.

Following the Western encroachment into the Waianae Coast, a swift decline in population occurred due to disease (CSH 2018). The okuu epidemic of 1804 (thought to be cholera) and smallpox epidemic of 1853 decimated the population of the Waianae Coast.

The first census figures were gathered by the missionaries from 1831-1832 and 1835-1836. Population figures for Waianae were 1,868 and 1,654 respectively (CSH 2018). By 1855, the total population of the Waianae Coast was estimated to be about 800. This catastrophic depopulation facilitated the passing of large tracts of land into the hands of a few landholders and led to the decline of the traditional economy that once supported the region (CSH 2018).

#### **Mahele Land Division**

The Organic Acts of 1845 and 1846 initiated the process of the Mahele, which divided the Hawaiian lands and introduced the concept of private property into Hawaiian society. In 1848, the crown and alii (royalty) received their land titles. The ahupuaa of Waianae, which included Lualualei, was listed as Crown Lands and was claimed by King Kamehameha III. Many of the chiefs became indebted to American merchants. A common practice was to lease or mortgage large,

unused tracts of land to other high chiefs and foreigners to generate income and pay off debts (CSH 2018).

The Kuleana Act of 1850 confirmed and protected the rights of commoners and native tenants. Under this act, the native tenant was required to file a claim with the Land Commission within a specified time period. Not everyone who was eligible to apply for kuleana lands did so and some claims were not awarded. Out of the 2,500,000 acres of Crown and Government Lands, only 30,000 acres of kuleana land were awarded. A total of 12 land claims were made in Lualualei Ahupuaa but only six were awarded. All six awarded lands were mauka of the Project Site (CSH 2018).

### **Ranching and Sugar**

One of the first areas to be utilized for ranching on the Waianae Coast was in Lualualei. Hawaii Bureau of Land Conveyances (1845-1869) records show that William Jarrett leased approximately 17,000 acres of land from Kamehameha III in 1851. This was the beginning of Lualualei Ranch (CSH 2018).

The sugar industry came to the Waianae coast in 1878 when the first sugar cane was planted in upper Waianae Valley. By 1892, at least 300 acres of cane were planted in Lualualei. In addition to the cultivated lands, a railroad, irrigation ditches, flumes, reservoirs, and plantation housing were constructed to support the sugar industry.

By 1901, the Waianae Sugar Company had obtained a five-year lease on 3,322 acres of land in Lualualei to be used for raising cane and ranching (CSH 2018). Although it was never a large-scale plantation by modern standards, it was one of the first and last to be served by a plantation railroad. The Oahu Railway & Land Company (OR&L) railroad ran along the ocean side of Farrington Highway. The cane from the mountain areas of Lualualei was loaded onto a railroad and transported to the mill at Waianae. The Railway served the Waianae Coast until it closed in 1947.

By the 1940s, Waianae Sugar Company could no longer compete against foreign companies with cheaper labor. Drought, labor unions, and land battles caused the Waianae Sugar Company to fail and, in 1947, Amfac, Inc. purchased and closed the plantation.

### **Homesteading**

The Republic of Hawaii opened up lands for homesteading in 1895 following the overthrow of the Hawaiian monarchy in 1893, when Crown Lands and Government Lands were combined to become Public Lands. The hope was to attract a “desirable class of immigrants”—Americans and those of Caucasian decent (CSH 2018). There were two waves of homesteading on the Waianae Coast; the first wave impacted Lualualei. Due to the lack of water, the Lualualei homestead lots were classified as second-class pastoral land, rather than agricultural land. These homesteads were sold in three series between the years 1903 and 1912. By the early 1920s, about 40 families

had settled on homestead lots in Lualualei (CSH 2018). No homesteads were awarded at the Project Site.

### **U.S. Military**

Another major influence in Lualualei during the twentieth century was the U.S. military. By 1929, over 8,184 acres of the McCandless Cattle Ranch had been condemned and purchased by the U.S. Navy for the construction of a Naval Ammunition Depot for ships of the Pearl Harbor Naval Base. The construction of Naval Magazine LLL and Radio Transmission Facility took place in Lualualei between 1930 and 1935. Lualualei Naval Road was constructed in that time period. The number of troops stationed and trained on the Waianae Coast during World War II (WWII) at times reached 15,000 to 20,000. Waianae beaches were fortified with barbed wire and concrete bunkers—many of which are still visible today. At the time, the U.S. military government severely curtailed the movements of the local population (CSH 2018).

After WWII, the lower portions of Lualualei Valley that had been utilized by the military were developed into residential lots. In 1971, the Navy began subleasing some of their lands for agricultural uses, primarily for grazing and bee keeping. In 1995, President Bill Clinton signed the Hawaiian Home Lands Recovery Act, which was authored by Senator Daniel Akaka and set a dollar value on the lands confiscated in Lualualei. Three years later, the Department of Hawaiian Home Lands (DHHL) was awarded 894 acres of surplus federal land under this Act. The U.S. Navy was granted continued use of the Lualualei facilities. Today, two antennas of the U.S. Navy's communication systems are still present and stand at 1,503 feet amsl, the State's tallest structures.

#### **5.1.2.3 Settlement Patterns for the Region**

The summary of settlement patterns for the region is based on archaeological surveys, published research, and traditional accounts reviewed by CSH and summarized in Appendix G.

Settlement patterns were heavily influenced by water resources. The windward side of Oahu, with its expansive forest resources, water resources for agriculture, and abundant marine resources, was more appealing to early settlers than the drier area. Foraging trips to the drier areas on the leeward side of Oahu were likely. As the population on the windward side increased, permanent settlement spilled over into the leeward areas of the island that had water resources, and eventually spread to the less watered regions of the leeward side, including Lualualei.

Pre-contact settlement patterns and land use in Lualualei was greatest near the coastal areas where marine resources were plentiful, and in the mountainous interior where there was sufficient rainfall. The intervening lands, including the Project Site, were dry scrubland and it is unlikely it would have been frequently utilized by Native Hawaiians. The Native resident population likely used multiple residences, one at the coast and one in the mountains. It is also possible that there was an informal exchange network whereby coastal dwellers traded marine resources with the agricultural and forest products of the inland dwellers (CSH 2018).

Permanent habitation of inland Lualualei occurred as early as 1620 AD and temporary habitation occurred in the mid-1400s, based on radiocarbon dating. There is less archaeological data from the coastal areas, but temporary coastal settlement likely occurred as early as 1460 AD. Traditional accounts suggest the coastal areas of Lualualei contain cultural deposits related to habitation, including human burials (CSH 2018).

By the mid-1800s, the traditional Native Hawaiian lifestyle in the valley of Lualualei was in decline. The sandalwood trade, cattle ranching, and sugar production brought foreign populations and influences on the Waianae Coast. The Native Hawaiian population was quite low in the latter half of the 19th century. Homesteading slowly increased the population beginning in the early 1900s, however, the population along the Waianae Coast may always have been quite low due to a lack of water.

#### 5.1.2.4 Archaeological Research

There are 23 archaeological studies previously completed in the vicinity of the Project Site (see Table 5-1). The locations of these studies are shown in Figure 5-1, which also indicates the number of historic properties designated in each study area. Four of the studies included the Project Site (bold type).

**Table 5-1 Previous Archaeological Research**

Reference	Nature of Study	Location	Results (SIHP # 50-80-08)
McAllister 1933	Island-wide reconnaissance survey	Lualualei Ahupuaa	Recorded eight sites in or near Lualualei: Site 147, Ilihune Heiau; Site 148, Maui Rock; Site 149, Nioiula Heiau on Halona Ridge; Site 150, House sites or heiau at Pahoa cliffs; Site 151, Kakioe Heiau at Puhawai; Site 152, Puu Paheehee Heiau; Site 153, Kuilioloa Heiau; and Site 162, Mauna Kuwale burial cave.
<b>Bordner 1977</b>	<b>Reconnaissance survey</b>	<b>TMK: (1) 8-7-009</b>	<b>No historic properties identified.</b>
Chiogioji and Hammatt 1993	Archaeological survey and testing	TMK: (1) 8-7-021:017	No historic properties identified.
Hammatt et al. 1993	AIS	Lualualei Golf Course, TMKs: (1) 8-7-009:002; (1) 8-7-010:006, 010; and (1) 8-7-019:001	Identified eight historic properties: two traditional Hawaiian (habitation complex and remnants of a wall) and six post-contact (cattle wall, furnace, wells, house lot, and cement foundation structure).
<b>Sinoto and Pantaleo 1994a</b>	<b>Reconnaissance survey</b>	<b>TMKs: (1) 8-7-007, 8-7-008, (1) 8-7-009, (1) 8-7-021, and (1) 8-7-022</b>	<b>No historic properties identified.</b>
Sinoto and Pantaleo 1994b	Reconnaissance survey	TMKs: (1) 8-7-6, 8-7-8, 8-7-033, and	No historic properties identified.



Reference	Nature of Study	Location	Results (SIHP # 50-80-08)
		8-9-002	
Dega 1998	Reconnaissance survey	TMKs: (1) 8-7-006 and 8-7-007	Observed subsurface cultural layer and WWII era bunkers (no SIHP #s designated).
McDermott and Hammatt 2000	AIS	Ulehawa Beach Park, TMKs: (1) 8-7-005:001, 003, and 005; 8-7-006:003; and 8-7-008:001, 026	Two subsurface cultural layers designated SIHP #s -5762 and -5763, consisting of midden (marine shell, fishbone) and traditional Hawaiian (fishhooks, volcanic and basalt flakes) and post-contact (glass, metal, and concrete fragments) artifacts; layers likely date to late pre- or early post-contact period.
Elmore and Kennedy 2001	AIS	Mahinaau Rd. from Maiuu Rd. to Kaulawaha Rd.	Documented two historic properties: SIHP # -5949, subsurface cultural layer with associated features (including human remains), and SIHP # -5950, a portion of a sugar plantation camp and associated infrastructure features (water pumping station, foundations, and well).
Kennedy 2003	Addendum AIS	TMKs: (1) 8-7-008:076 and 077	No historic properties identified; documented three sinkholes, none determined to be significant.
Ostroff and Desilets 2005	Archaeological monitoring	Farrington Hwy between Hakimo Rd and Haleakala Ave	Documented charcoal-enriched sand deposits possibly associated with SIHP # -5763 (subsurface cultural deposit).
Jones and Hammatt 2006	Archaeological monitoring	Laiku, Waiolu and Princess Kahanu Streets	No historic properties identified.
<b>O'Leary and McDermott 2006</b>	<b>AIS</b>	<b>Proposed Nanakuli B Site Materials Recovery Facility and Landfill</b>	<b>Identified two historic properties: SIHP #s -6681, WWII-era concrete bunker, and -6699, pre-contact basalt rock shelter.</b>
Souza and Hammatt 2006	Archaeological monitoring	Farrington Hwy between Nanakuli Ave and Hakimo Rd	No historic properties identified.
<b>Hammermeister and McDermott 2007</b>	<b>Addendum AIS</b>	<b>Proposed Nanakuli B Site Materials Recovery Facility and Landfill</b>	<b>Investigated a stacked stone mound, designated as SIHP # -6920.</b>
Hammatt and Shideler 2010	Supplemental AIS and interim protection measures implementation	TMK: (1) 8-7-009:002 portion	Further documentation and implemented preservation measures for SIHP # -4366, terrace remnants.

Reference	Nature of Study	Location	Results (SIHP # 50-80-08)
Dagher and Spear 2011	Literature review and field inspection	Pacific Mall, TMK: (1) 8-7-008:012	No historic properties identified.
Mierzejewski and Hammatt 2014	Archaeological monitoring	Ulehawa Beach Park	No historic properties identified.
Hammatt and Shideler 2015	Literature review and field inspection	TMK: (1) 8-7-007:005	No historic properties identified.
Stark et al. 2015	Literature review and field inspection	TMKs: (1) 8-7-009:025 and 8-7-021:026	Two potential historic properties: CSH 1, dry-stacked historic (circa 1936) rock wall, and CSH 2, linear pile of boulders.
DeMaio Starr et al. 2016	AIS	TMK: (1) 8-7-007:001	No historic properties identified.
Hammatt and Shideler 2018	Reconnaissance survey	TMKs: (1) 8-7-033:001 and 027	No historic properties identified.
Hammatt et al. 2018	Reconnaissance survey	TMK: (1) 8-7-033:001	No historic properties identified.

**Bold** = On Project Site.

Source: CSH 2018.

The historic properties identified in the archaeological studies are listed in Table 5-2 and shown on Figure 5-2. Those in bold type were on the Project Site.

**Table 5-2 Previously Recorded Historic Properties Near the Project Site**

SIHP # 50-80-08	Formal Type	Description	Source (as cited in CSH 2018)
#50-80-07-148	Maui Rock	Large boulder	McAllister 1933:110
-4364	Wall	Associated with ranching	Hammatt et al. 1993:25
-4365	Shelter	Military	Hammatt et al. 1993:25
-4366	Habitation complex	–	Hammatt et al. 1993:25
-4367	Wall	Agricultural	Hammatt et al. 1993:25
-4370	House lot	Associated with ranching	Hammatt et al. 1993:25
-4371	Wells	Associated with ranching	Hammatt et al. 1993:25
-4372	Foundation	Associated with ranching	Hammatt et al. 1993:25
-4373	Incinerator	Associated with military/ranching	Hammatt et al. 1993:25
-5761	Bunkers and slabs	WWII-era military	McDermott and Hammatt 2000
-5762	Subsurface cultural layer	Pre- and/or early post-contact	McDermott and Hammatt 2000
-5763	Subsurface cultural layer	Pre- and/or early post-contact	McDermott and Hammatt 2000

-6681	<b>Military infrastructure</b>	<b>WWII-era concrete bunker</b>	<b>O’Leary and McDermott 2006</b>
-6699	<b>Rock shelter</b>	<b>Small pre-contact basalt rock shelter</b>	<b>O’Leary and McDermott 2006</b>
-6920	<b>Stone mound</b>	<b>Stacked stone mound interpreted as a traditional Hawaiian marker</b>	<b>Hammermeister and McDermott 2007</b>
-9714	OR&L railroad	Railroad bed	McDermott and Hammatt 2000
CSH 1	Wall	Dry-stacked historic (circa 1936) rock wall	Stark et al. 2015
CSH 2	Linear pile of boulders	Possibly a result of mechanical bulldozer push	Stark et al. 2015

**Bold** = On Project Site.

Source: CSH 2018.

The archaeological investigations in Lualualei Valley are consistent with the accounts of settlement history. The studies demonstrate a pattern of high-intensity land use in the upper Lualualei Valley and along the coast with a relative gap of archaeological features in the intervening areas. More than 500 historic properties and over 1,000 features were identified in the upper Lualualei Valley. These features are related to habitation, agriculture, rituals, ceremonies, and the manufacture of stone tools. Studies adjacent to the ocean identified two cultural layers that exhibited charcoal deposits, pit features, fishhooks, and midden associated with traditional Hawaiian habitation and occupation (CSH 2018).

The historic properties identified in the intervening central area were either post-contact or of equivocal origin. The lack of traditional Hawaiian features discovered in these areas may be due to modern ground disturbance activities (e.g., bulldozing, farming, ranching) that destroyed the features; however, it is more likely that relative to the inland and ocean areas, the central areas lacked sufficient resources. Based on the archaeological findings of trails, lithic scatters, and temporary habitation sites, the central midland area was likely used intermittently in transit between the ocean and upper valley (CSH 2018).

#### 5.1.2.5 Historic Properties

“Significant historic property,” as defined by HAR §13-284-2, is eligible for listing on the State of Hawaii Register of Historic Places (Hawaii Register). To be significant, a historic property meets one or more of the following criteria (HAR §13-284-6):

- Criterion A: associated with events that have made an important contribution to the broad patterns of our history.
- Criterion B: associated with the lives of persons significant in our past.
- Criterion C: embodies the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value.
- Criterion D: yielded or likely to yield information important in prehistory or history.
- Criterion E: important value to native Hawaiian people or to another ethnic group of the state due to traditional cultural practices important to the group's history and cultural identity.

CSH archaeologists identified three historic properties within the Project Site. These historic properties are described in four CSH reports (CSH 2018):

- *Archaeological Inventory Survey of 200 Acres for the Proposed Nanakuli B Site Materials Recovery Facility and Landfill*, accepted by SHPD in January 2006 (CSH 2006).
- *Addendum to Archaeological Inventory Survey of 200 Acres for the Proposed Nanakuli B Site Materials Recovery Facility and Landfill*, accepted by SHPD in February 2008 (CSH 2007a).
- *Cultural Impact Assessment for the PVT Relocation Integrated Solid Waste Management Facility Project*, prepared in May 2019 (CSH 2007b).
- *Preservation Plan for State Inventory of Historic Properties #50-80-08-6699*, accepted by SHPD in December 2007 (CSH 2007c).

The historic properties are not protected from inadvertent or intentional (e.g., graffiti) disturbance. CSH archaeologists conducted a field investigation on July 3, 2018 to re-identify the three known historic sites and assess their condition relative to previous observations. The three significant historic properties' characteristics, conditions, and the SHPD-approved protective measures are summarized below.

1. SIHP # 50-80-08-6699: Rock Shelter

A rock shelter composed of small pahoehoe basalt rock is located on the Project Site's southeastern boundary upslope of the two water tanks (Figure 5-2 and photo inset). The age of the rock shelter site is estimated to be late pre-contact (1480-1680 AD).

The floor of the rock shelter consists of loose silty clay with numerous basalt pebbles, cobbles, and boulders. At the time the rock shelter site was used, it would have been approximately 3.75 feet from floor to ceiling. Testing of subsurface features included a small scoop hearth with a lens of charcoal on ash containing animal bone, kukui nut, and marine shell. A second testing location included animal bone, charcoal, marine shell, basalt flakes, coral, and volcanic glass (CSH 2018).

The charcoal and ash are consistent with fire burning in the hearth. The coral, marine shell, and fish bone would be materials transported 1.25 miles from the coast. The volcanic glass is indicative of human use and manipulation of tools within the cave. The small quantity of volcanic glass suggests the shelter was used to rework tools and not create tools.



SIHP #50-80-08-6699, Rock Shelter opening. View to the east. (CSH 2018)

Artifacts found within the rock shelter site suggest it was used as a temporary habitation on an infrequent basis. Native Hawaiians living in the midland portions of Luualualei likely took refuge from the mid-day heat or sought shelter while traveling between the deep valley and the coastline.

During the 2018 field inspection, the site appeared undisturbed and no rockfall was observed in the shelter.

#### *Historical Property Determination:*

The historic property is listed on the Hawaii Register under Criterion D: yielded, or is likely to yield, information important for research on prehistory or history. It retains sufficient integrity.

The rock shelter is protected under the *Preservation Plan*, accepted by SHPD in 2007 and included in Appendix G.

#### 2. SIHP # 50-80-08-6681: Concrete Bunker

The concrete bunker was built into the pahoehoe basalt hill located in the southernmost corner of the Project Site (Figure 5-2 and inset). The four walls and roof were observed to be intact. The interior dimensions were approximately 10 feet by 10 feet by 6 feet tall. The entrance is on the eastern wall and the other three walls have narrow horizontal openings (below). There was a 3.6-foot drop to the floor of the bunker from the door. It is likely to have been constructed during the WWII rapid build-up between 1942 and 1943.



During the 2018 field inspection, the bunker was found to be almost completely unchanged since the 2006 AIS (CSH 2006). The concrete is still in good condition, and no significant damage or deterioration was noted. Graffiti and litter were observed inside and outside the bunker.

*Historical Property Determination:*

The historic property is listed on the Hawaii Register under Criterion A (property reflects major trends or events in the history of the state or nation) and D (yielded or likely to yield information important in prehistory or history).

No further historic preservation work was recommended.

3. SIHP # 50-80-08-6920: Rock Mound

The rock mound is interpreted as a traditional Hawaiian marker. It is a roughly circular, 6.5-foot diameter, stacked rock mound composed of basalt boulder and cobbles identified on the eastern



*SIHP #50-80-08-6681, Concrete Bunker. North wall, view to the south. (CSH 2018).*

Project Site boundary on the lower slope of Puu Heleakala (Figure 5-2 and inset). The basalt stones used for the mound's construction are readily available from nearby exposures of the bedrock on the eroding slope. Large boulders formed the periphery of the mound, while small boulders and cobbles formed the center. No surface artifacts or cultural materials were observed on the mound (CSH 2018).

During the current field inspection, the rock mound was found to be almost completely unchanged since the 2007 addendum AIS by Hammermeister and McDermott (CSH 2018). The site was overgrown with vegetation and there are no signs of disturbance or recent visitors.





SIHP #50-80-08-6920, Rock Mound (CSH 2018).

#### *Historical Property Determination:*

The historic property was assessed as significant under Criterion D (yielded, or is likely to yield, information important for research on prehistory or history) and retains sufficient integrity. No further historic preservation work is recommended.

### **5.1.3 Impacts**

“Adverse effect” to a historic property is broadly defined in HAR §13-284-7 and includes “partial or total destruction or alteration of the historic property, detrimental alteration of the properties’ surrounding environment, detrimental visual, spatial noise or atmospheric impingement, increasing access with the chances of resulting damage, and neglect resulting in deterioration or destruction.”

#### **5.1.3.1 Proposed Action**

All three historic properties are outside the proposed site development area (Figure 2-3). CSH observed in 2018 that there has been little to no change to the three properties since they were last at the Project Site, approximately ten years prior. Sufficient information regarding location, extent, function, and age of the historic features was documented in the previous and current (2018) archaeological investigation. A determination of “no historic properties affected” by the Proposed Action is recommended by CSH, as per HAR § 13-284-7 (CSH 2018).

The PVT staff and security presence under the Proposed Action would likely deter public access and intentional or inadvertent historic property disturbance at all three historic sites. The result would be a beneficial short- and long-term, direct and indirect impact on the protection of the historic sites. No potential for direct adverse impact to two of significant historic properties (SIHP # 50-80-08-6681 Concrete Bunker and SIHP # 50-80-08-6920 Rock Mound) was identified and no mitigation measures were recommended by CSH.

The third historic property, SIHP # 50-80-08-6699 Rock Shelter, is also outside and upslope of the site development area (Figure 2-3). Although an inadvertent direct impact related to physical disturbance of the historic site during construction is unlikely, CSH prepared and SHPD approved a Preservation Plan outlining long-term conservation measures (Appendix G includes the Preservation Plan of 2007 and SHPD correspondence). PVT will implement the Preservation Plan, as stated in Section 2.6.3, *Construction Impact Avoidance and Minimization Measures* resulting in short- and long-term, direct beneficial impacts to the historic site. No additional mitigation is warranted. The preservation measures are summarized as follows (CSH 2007c):

- Identify the historic property and a 26-foot buffer surrounding the site on design and construction drawings.
- Inform contractor of the historic property location and the importance of avoiding work within the buffer area.
- Construct interim and permanent fencing between the Project Site and the historic property to delineate the 26-foot buffer. The proposed security fence (Figure 2-3) will provide this barrier.
- No landscaping, stabilization, signage, or public access is included in the Preservation Plan.

It is possible subsurface archaeological and cultural deposits (i.e., iwi kupuna, pohaku suitable for traditional construction) may be encountered during ground disturbing activities (CSH 2019). In the event that potential burials or other cultural finds be identified during ground disturbance, the construction contractor would immediately cease all work while the appropriate agencies are notified, pursuant to applicable law (HRS Ch. 6E), and mentioned in Section 2.6.3, *Construction Impact Avoidance and Minimization Measures*.

#### **5.1.3.2 No Action Alternatives**

Under the No Action Alternative, there would be no development at the Project Site.

The Project Site has remained vacant with no evidence of settlement, agricultural production, or other extended land use based on archaeological studies and historical context. This conclusion is supported by post-contact historic maps and images from 1906 (Figure 5-3), 1914 (Figure 5-4), 1919 (Figure 5-5), 1965 (Figure 5-6), and 1993 (Figure 5-7), respectively.

There would continue to be the potential for physical direct impact to the three historic properties (Concrete Bunker, Rock Mound, and Rock Shelter) due to vandalism or inadvertent human disturbance, as mentioned in the Existing Conditions. However, CSH did not observe any site changes in the 10-year interval between site visits. Compared to existing conditions, the No Action Alternative would have no short- or long-term, direct or indirect impact on historic properties.

### 5.1.4 Summary of Impacts and Potential Mitigation

A determination of “no historic properties affected” by the Proposed Action is recommended by CSH, as per HAR § 13-284-7 (CSH 2018). PVT presence would deter access to the historic sites for a direct and indirect beneficial impact on historic resources. The Proposed Action includes long-term preservation of the Rock Shelter, resulting in a direct, beneficial impact. Over time, the No Action Alternative would not alter existing conditions.

In the event that potential burials or other cultural finds be identified during ground disturbance, the construction contractor would immediately cease all work while the appropriate agencies are notified (Section 2.6.3, *Construction Impact Avoidance and Minimization Measures*).

**Table 5-3 Archaeological and Historic Resources Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Potential effect to significant historic property and/or archaeological features							
a. SIHP # 50-80-08-6699: Rock Shelter	+	+	+	+	none	0	0
b. SIHP # 50-80-08-6681: Concrete Bunker	+	+	+	+	none	0	0
c. SIHP # 50-80-08-6920: Rock Mound	+	+	+	+	none	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

## 5.2 Cultural Resources

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on cultural resources, beliefs, and practices.

### 5.2.1 Methodology

In addition to the *Archaeological Literature Review and Field Inspection Report* described in Section 5.1, *Archaeological and Historical Resources*, CSH prepared the *Cultural Impact Assessment for the PVT Integrated Solid Waste Management Facility Relocation Project, Lualualei Ahupuaa, Waianae District, Oahu TMK: [1] 8-7-009:007 (2019) (CIA)*, included as Appendix H of this EIS.

The CIA complies with Hawaii's environmental review process (HRS Ch. 343) which requires consideration of the Proposed Action's effect on cultural beliefs, practices, and resources, including traditional cultural properties. The CIA was conducted in accordance with the Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts*.

The CSH methods for identifying traditional practices and land uses at the Project Site and vicinity included:

1. Examination of cultural and historical resources, including Land Commission documents, historic maps, and previous research reports, with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal, and other resources or agricultural pursuits as may be indicated in the historic record. The research emphasis is on kaa (legends), wahi pana (storied places), olelo noeau (proverbs), oli (chants), mele (songs), and traditional moolelo (stories).
2. Review of previous archaeological work at and near the subject parcel that may be relevant to reconstructions of traditional land use activities; and to the identification and description of cultural resources, practices, and beliefs associated with the parcel.
3. Consultation and interviews with knowledgeable parties regarding cultural and natural resources and practices at or near the parcel; present and past uses of the parcel; and/or other practices, uses, or traditions associated with the parcel and environs.

Community outreach letters were sent to 132 individuals or groups. A copy of the outreach letter and documentation of communications is included in Appendix H.

Note: The archaeological evidence and the history (e.g., land transformation, development, and population changes) beginning with the early post-contact era to the present day is also described in the CSH *Archaeological Literature Review and Field Inspection Report for the PVT Integrated Solid Waste Management Facility Relocation Project, Lualualei Ahupuaa, Waianae District, Oahu* TMK: [1] 8-7-009:007 (CSH 2018). The findings are as described in Section 5.1, *Archaeological and Historical Resources*. This cultural resource section focuses on information not presented in Section 5.1.

## **5.2.2 Existing Conditions**

### **5.2.2.1 Traditional Cultural Property or Place**

The State Historic Preservation Office nominates traditional cultural properties or places to be included on the National Register of Historic Places (NRHP). A traditional cultural property is defined as, “Any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than 50 years” (HAR § 13-275-2 and § 13-284-2).

These traditions shall be founded in an ethnic community’s history and contribute to maintaining the ethnic community’s cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.

According to the NRHP database, there are no traditional cultural properties registered at or within the vicinity of the Project Site (CSH 2019).

### 5.2.2.2 Cultural Legends and Places

#### Mauiakalana

The Lualualei Ahupuaa is an important place in Hawaiian history. The traditional accounts of Lualualei focus on the mythology of Maui. The legends of Maui span Polynesia, Micronesia, and Melanesia. But Maui is best known throughout Polynesia for his mischievous tricks and supernatural powers. The Maui legends form one of the strongest links in the mythological chain of evidence which binds the inhabitants of the Pacific. Many believe that Maui attempted to bring the islands together from Kaena, but others believe it was from Ulehawa (CSH 2019). Throughout Polynesia, there are many similarities with only slight variations when discussing Maui's adventures (CSH 2019).

Each of the four main Hawaiian Islands may have had their very own Maui and each would have been a descendant of Hina with a distinct *wahi pana* (legendary place) associated with them. The four sons were: Maui-mua, Maui-waena, Maui-kiikii, and Maui-akalana. Maui-akalana is the Maui whose stories fill legendary accounts on the island of Oahu. According to legend, Maui-akalana went to Kahiki after the birth of his children who would later become the ancestors of Polynesia.

It was in Lualualei that Maui learned the secret of fire-making and perfected his fishing skills. Other legends include (CSH 2019):

- Maui slowed the speed of the sun so that his mother, Hina (moon goodess), could finish pounding and drying her *kapa* (woven fabric) in her cave on Heleakala before the sun would set.
- Maui seeks his grandfather who designs for him a flying apparatus in the shape of a bird. Maui flies to the mythical land of Moanalaha to rescue his wife who had been taken by Peapea-maka-walu (Eight-eyed bat).
- At the sea of Ulehawa, Maui attempted to join the Hawaiian Islands using his magical fishhook, Manai-a-ka-lani.
- Other famous accounts tell of the place where Maui's adzes were made and of his magic fishhook, Manaiakalani.

#### Wahi Pana

Wahi pana translates to "legendary places" and refers to descriptive place names that reveal its historical or legendary significance. Wahi pana can refer to natural geographic locations such as streams, peaks, rock formations, ridges, and offshore islands and reefs, or they can refer to Hawaiian divisions and man-made structures such as fishponds (CSH 2019).

Notable places and place names are shown on Figure 5-8. Some of these places are designated historic properties (discussed in Section 5.1, *Archaeological and Historical Resources*) and are shown on Figure 5-2. The following is a partial list of the Lualualei wahi pana identified in the CIA:

### Landforms

As cultural sites, several puu figure prominently within the Lualualei cultural landscape. Puu are important first for their view planes and their inaccessibility. Puu, in general, are landmarks, especially useful in discerning one's location or routes. The naming of puu, and the stories behind the name, contribute to the integrity of the place (CSH 2019).

- Puu Heleakala faces the setting sun. It is known as "hill that is the house of the sun" or "where the sun is snared." Maui as a child went to the top of this mountain to fight the sun to slow it down and make the days longer. Puu Heleakala separates the ahupuaas of Nanakuli and Lualualei.

Hina's Cave is on the western slopes of Puu Heleakala where Maui's mother, Hina, lived and made her kapa. Hina's Cave is referred to as the birth center of Oahu. Community interviewees have pointed to Hina's Cave as the source of the spirits known as "night marchers" that walk to the ocean near Maui Rock.

- Palikea is a peak at 3,098 feet on the borders of Honouliuli, Nanakuli, and Lualualei Ahupuaa. The name literally translates to "white cliff."
- Puu Kaua is a peak at 3,127 feet on the Waianae Mountain Range on the Lualualei and Honouliuli Ahupuaa border. The name literally translates to "war hill" or "fort."
- Puu Kanehoa peak is at 2,728 feet on the Lualualei and Honouliuli Ahupuaa border. It is named for the native shrubs in the area gathered for medicinal use.
- Puu o Hulu is a small mountain range with two peaks: Puu o Hulu Kai and Puu o Hulu Uka.

As shown in Figure 5-8, no cultural landforms were identified on the Project Site. Puu Heleakala and Hina's Cave are in the immediate vicinity of the Project Site.

### Passages and Trails

- Pohakea Pass is located on the Waianae Mountain Range at a peak elevation of 2,200 feet. The pass serves as a passage to Honouliuli Ahupuaa and is the location where Hiiaka witnessed her friend Hopoe turned into stone by her sister, Pele, the goddess of fire.
- Kolekole Pass provides access from Lualualei through the Waianae mountains to the current Schofield Barracks Military Reservation. There is a large stone at the pass which was once thought to be a sacrificial stone. Others say the stone was a female guard/watchman named Kolekole who guarded the pass. It was an area where fighters practiced their skills on



unsuspecting travelers. It was also where Kahekili's army from Maui killed the last of the Oahu warriors led by Kahahana.

- Three ancient trails were reported in the Waianae District during the early post-contact period: the circle island trail; the Pohakea trail and Kolokole trail.

CSH did not identify historic passages or trails on or in the immediate vicinity of the Project Site (Figure 5-8).

### **Pohaku (rock)**

- Maui Rock (SIHP 50-80-07-148) is named for the demi-god Maui, who landed here when he first came to the Hawaiian Islands. He lived in a shelter northeast of the rock and obtained water from a nearby spring. Standing at the rock facing the mountains at sunrise one can see Maui reposing in the mountain formations. The rock is within the Garden Grove condominium complex.
- Petroglyph Pohaku. The rock with petroglyphs was removed and currently is stored by Bishop Museum. It was located on the coastline north of Puu o Hulu Kai.
- Kolekole Pass Sacrificial Stone. The stone measures from 5 to 8 feet high and about 8 feet wide with a central depression 1.5 feet deep and 2 feet in diameter at the top. On one side, there is a projection in which persons were made to stand and lean over when decapitated. This stone is also said to represent a woman by the name of Kolekole, the guardian of the pass.

There are no cultural pohaku (rocks) on the Project Site (Figure 5-8).

### **Heiau (pre-christian places of worship)**

- Nioiula Heiau (SIHP 50-80-08-149), is located on Halona Ridge. Today, the heiau is within the Lualualei Naval Preservation. The heiau is walled and paved and classified as sacrificial. The heiau is said to be ancient and belonged to Kakuhihewa. The northern portion of the heiau was almost completely destroyed and the stones were later used to build a cattle pen on the McCandless property. Cattle that lived in the pen became sick and died, resulting in infrequent use and eventual abandonment of the area.
- Home sites (SIHP 50-80-08-150) that consist of walls and small terraces reportedly used as house sites or a possible heiau. These sites are in the middle of Lualualei at the foot of Pahoa.
- Kakioe Heiau (SIHP 50-80-08-151) is located in Puhawai. Kakioe was noted as a small heiau; however, the site is completely destroyed and only a small spring existed during the time of the survey.

There are no heiau on or in the immediate vicinity of the Project Site (Figure 5-8).

### 5.2.2.3 Community Consultation

CSH contacted 132 individuals or groups to identify the cultural resources, cultural practices, and beliefs that may be affected by the Proposed Action. Specifically, the information sought was as follows (CSH 2019):

- General history as well as present and past land use of the project area.
- Knowledge of cultural sites which may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials.
- Knowledge of traditional gathering practices in the project area, both past and ongoing.
- Cultural associations of the project area, such as *moolelo* and traditional uses.
- Referrals of *kupuna* or elders and *kamaaina* who might be willing to share their cultural knowledge of the project area and the surrounding ahupuaa lands.
- Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.

The list of contacts, an example of the letter request for information, a summary table of correspondence, and a record of the responses are included in Appendix H.

Cultural information was received from the following individuals:

- Shad Kane, Ewa Moku Representative, Aha Moku Advisory Council. Written communication.
- Kukui Maunakea-Forth, Representative of MA'O Organic Farms. Interview.
- Cynthia Rezentes, Chair, Nanakuli-Maiili Neighborhood Board; Waianae Community Board Member. Written communication.
- Kali Watson, President & CEO, Hawaiian Community Development Board. Written communication.

Based on the informants' life experience, the Project Site has been vacant.

As described by Mr. Kane: "As all other areas around the island it [the region] has an ancient history. However, like most other areas it has been largely disturbed. During most of the 1900s it has been used for cattle grazing. During the 1980s I did volunteer work for Ed Keliikoa and Wayne Silva roping, rounding up and branding cattle. In that region we used to gather the cattle in the higher elevations and bring them down into pens where the roping and branding took place. I cannot remember seeing any cultural structures while riding my horse on those properties."

Mr. Kane was not aware of any traditional gathering practices, burials, or archaeological sites in the area. He stated: “Most of that region had foreign weeds. During the time I spent riding in that area I do not recall even seeing uhaloa growing.”

Interviewee Kukui Maunakea-Forth of MA’O Organic Farms voiced a concern about potential impacts to cultural resources, practices, and beliefs. Mrs. Maunakea-Forth identified potential cultural resources within the vicinity of the Project Site, including: ephemeral ponds and streams from upland springs, loi kalo (taro) terraces located on the southeastern side of Ulehawa Stream, and pohaku (rocks) that are suitable for stone masonry. Additionally, Kukui Maunakea-Forth identified culturally significant sites or wahi pana in the vicinity of the project area: Puu Heleakala and Ka Olae (the 236-acre parcel recently acquired by MA’O Organic Farms). She is concerned about potential impacts of the Proposed Action on MA’O Organic Farms’ future farming operations north of the Project Site. No cultural beliefs were identified in connection to the Project Site.

Mr. Rezentes mentioned the three historic sites identified in Section 5.1, *Archaeological and Historical Resources*. Ms. Rezentes also recalls: “Mauka of this parcel (near the JBPHH Lualualei Entry Gate) was a farming area that has been documented by the community during the disagreement with the nearby property owner’s desire to establish a light industrial park.”

Mr. Watson expressed his appreciation for PVT’s positive influence on the community in general and the Hawaiian community in particular: “PVT has always been very supportive of the community, especially helping the homesteaders with the disposal of construction debris when we were doing the Kauhalepono Replacement homes project. Therefore, I support their proposed development. Let me know how I can help. I ...can testify of their positive community involvement.”

#### **5.2.2.4 Traditional Cultural Practices**

Traditional practices mark or represent aspects of Hawaiian culture that have been practiced since ancient times. Traditions are evolving and prone to change resulting from multiple influences, including modernization and the influence of other cultures. Within Hawaii, a broader ‘local’ multicultural perspective exists. CSH focused on traditional Hawaiian cultural practices as were practiced within the ahupuaa in ancient times, and the aspects of these traditional practices that continue to be practiced today. However, the CIA acknowledges that multicultural influences and entanglements may have changed or created these traditions (CSH 2019).

The CIA (2019) identifies traditional and non-traditional farming activities as a cultural practice: “Although current farming activity includes the cultivation of both traditional and non-traditional crops, the practice itself is considered to have historical antecedence within Lualualei. Due to understandings of farming as an articulation of Hawaiian identity and manifestation of culture, agricultural activity in the vicinity of the project area may be understood to represent a cultural practice.”

No traditional cultural practices were identified at the Project Site. There was no evidence of historic subsistence gathering of plant and aquatic resources or other agricultural production at the Project Site. No evidence of religious practice or burials was identified at the Project Site.

The upper valleys and coastal areas of Lualualei were identified as areas of subsistence gathering and agriculture. MA'O Organic Farms currently cultivates approximately 23 acres within Lualualei Ahupuaa and intends to expand their farming operations to the parcel adjacent and north of the Project Site (Figure 5-9). They intend to cultivate traditional and non-traditional crops.

### **5.2.3 Impacts**

#### **5.2.3.1 Proposed Action**

The Proposed Action would have no short- or long-term, direct or indirect impacts to traditional cultural properties, places, or practices.

There were no traditional cultural places or practices identified at the Project Site. Three historic properties were identified at the Project Site but are located outside of the development area. Potential impacts to archaeological and historic resources are discussed in Section 5.1, *Archaeological and Historical Resources*.

The Project Site lies in the vicinity of culturally significant sites, including Puu Heleakala (Hina's Cave), Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. CSH (2019) recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei.

Potential cultural resources were identified within the vicinity of the Project Site, including: ephemeral ponds and streams, loi kalo (taro), and pohaku (rocks) that are suitable for stone masonry. Ulehawa Stream and its historic loi kalo exist outside the Project Site. CSH (2019) recommends: "that a qualified professional provide an assessment of the potential for ephemeral freshwater resources within and near the project area." Water quality impacts are provided in Section 3.4, *Water Resources*. The Proposed Action would have no impact on surface water.

Farming will occur in the vicinity of the Project Site. MA'O Organic Farms expressed concern that the Proposed Action will have an adverse impact on their future farming activity north of the Project Site. The MA'O Organic Farms parcel is upwind and upgradient of the Project Site. CSH (2019) recommends in the CIA that: "an environmental scientist or similar qualified professional provide an assessment of the impacts of the proposed action to the surrounding environment and community. Such an assessment will address concerns for potential impacts to future agricultural activity occurring north of the project area." The assessments are addressed in this DEIS.

Environmental controls would be implemented at the Project Site as described in Section 2, *Proposed Action and Alternatives*. Potential air quality impacts, including the results of ten studies,

are provided in Section 3.5, *Air Quality*; water quality impacts, including decades of groundwater data, are provided in Section 3.4, *Water Resources*. Potential impacts related to future land uses are addressed in Section 5.3.2.5, *Land Use Characteristics* and Section 7.1, *Cumulative Impacts*. As discussed in these sections, the Proposed Action would have no short- or long-term, direct or indirect impacts to farming practices in the Lualualei Ahupuaa.

#### 5.2.3.2 No Action Alternative

The No Action Alternative would have no short- or long-term, direct or indirect impact on the cultural practices or landscape because the Project Site would remain undeveloped. The PVT ISWMF landfill will be closed, and the final vegetative cover would be established.

#### 5.2.4 Summary of Impacts and Potential Mitigation

The Proposed Action and No Action Alternative would have no short- or long-term, direct or indirect impacts to traditional cultural properties, places, or practices.

**Table 5-4 Cultural Resources Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Impact to traditional cultural property, places, or practices	0	0	0	0	None	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

### 5.3 Socioeconomic Resources and Land Use Characteristics

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on socioeconomic resources and land use characteristics including:

- Waianae Region's social and economic characteristics including population demographics, housing, and employment;
- PVT's current social and economic contribution to the State, local government, and the community; and
- Existing and planned land use in the vicinity of the Project Site.

### 5.3.1 Methodology

The methods employed by Hart Crowser for this section included:

1. Review U.S. Census Bureau data for Oahu and the Waianae Region;
2. Review PVT's economic and employment data for the PVT ISWMF;
3. Conduct a visual survey of land uses in the vicinity of the Project Site from public roadways, as a basis for the assessment of land use characteristics; and
4. Assess the community perception regarding PVT and the Proposed Action, based on socioeconomic comments received during the EISPN comment period.

### 5.3.2 Existing Conditions

#### 5.3.2.1 Population and Demographics

The U.S. Census Bureau collects socioeconomic characteristics from the American Community Surveys (ACS) in the years between their decennial census counts. The data is self-reported, based on questionnaires completed by household representatives. The most recent ACS social dataset for the Waianae Region was published in the *2012-2016, Population and Housing Narrative Profiles: Waianae Region (Zip Code 96792) and Island of Oahu* (U.S. Census Bureau 2018) and is summarized in Table 5-5. The social dataset provides some insights into the demographic characteristics of those persons who reside or travel near the PVT ISWMF.

Approximately 48,300 persons reside in the Waianae Region (Zip Code 96792), 49% of which are male and 51% female.

**Table 5-5 Social Data of Waianae Region and Oahu (ACS 2012–2016)**

Characteristic	Waianae	Oahu
Population	48,300	987,000
% Male / % Female	49/51	50/50
<b>Age (Years)</b>		
0-17	29%	22%
18-24	11%	10%
25-64	50%	52%
65 and older	10%	16%
Median	33	37
<b>Households</b>		
Households	11,500	309,500
Average household size	4	3.1
Households with a disabled person	15%	11%
<b>Housing</b>		
Housing Units	11,500	309,500
Owner Occupied	58%	55%
Renter Occupied	42%	45%



Characteristic	Waianae	Oahu
<b>Race</b>		
% Native Hawaiian & Other Pacific Islander	59	12
% Asian	21	56
% White	17	28
% Reporting two or more races	38	23
<b>Education Level (Age 25+ years)</b>		
High School Graduates	86%	91%
College Degree	12%	33%

Source: U.S. Census Bureau 2018.

### Age Characteristics

Available age distribution data from the 2012-2016, *Population and Housing Narrative Profiles: Waianae Region (Zip Code 96792)* (Table 5-5) indicates:

- Children and young adults, ranging between birth and 17 years of age, comprise of 29% of the population.
- Young adults, between ages 17-24 years of age represent about 11% of the resident population. The lower population of persons in this age group is not surprising as young adults often migrate away from their original place of residence in search of new jobs, educational opportunities, or travel.
- The primary working age population (persons between 25 and 64 years of age) comprise of about 50% of the resident population.
- Adults in their retirement years (65 years of age and older) account for about 10% of the resident population.

### Family and Household Characteristics

The most recent ACS survey (Table 5-5) reported:

- There are 11,500 households in the Waianae Region. The average household was inhabited by four residents. These households include a combination of both family and non-family households.
- Approximately 15% of households are inhabited by a disabled person.
- Of the 11,500 housing units in the Waianae Region, 58% are owner-occupied and 42% are renter-occupied.

## Ethnic Background

The people of the Waianae Region comprise of a unique mixture of ethnic groups (Table 5-5):

- Descendants of Native Hawaiians and other Pacific Islanders dominate (59%) the resident population of the Waianae Region.
- Other residents are primarily of Asian (21%) and Caucasian (17%) decent. The remaining 3% of residents are of African American, American Indian, and Latin American decent.
- While the majority of Waianae’s residents are part of one ethnic group, a sizable portion (38%) of residents are affiliated with two or more ethnic groups.

## Education Level

The most recent ACS survey (Table 5-5) indicates that 86% of Waianae region residents have graduated from high school and 12% have graduated from college.

### 5.3.2.2 Waianae Region Economic Characteristics

The most recent ACS economic dataset for the Waianae Region was published in the *2012-2016, Population and Housing Narrative Profiles: Waianae Region (Zip Code 96792) and Island of Oahu* (U.S. Census Bureau 2018) and is summarized in Table 5-6.

**Table 5-6 Economic Data of Waianae Region and Oahu (ACS 2012-2016)**

Characteristic	Waianae	Oahu
<b>Household Income</b>		
Median	\$59,741	\$77,161
Below \$15,000	14%	8%
Above \$150,000	9%	17%
<b>Poverty Level/Government Assistance</b>		
Persons below poverty level	24%	10%
Children (Age 18 years or less)	30%	12%
Elderly (Age 65 years or more)	11%	8%
Renters spending more than 30% of household income on housing	66%	56%
<b>Occupation (Civilian)</b>		
Employed	52%	58%
Management, business, sciences, and arts	24%	36%
Service	23%	21%
Sales and office	25%	25%
Natural resources, construction and maintenance	14%	9%

Production, transportation and material moving	15%	9%
<b>Commute to Work</b>		
Average commute time	44 minutes	29 minutes
Public transportation	14%	9%
Walk	1.6%	5.2%

Source: U.S. Census Bureau 2018.

### Household Income and Poverty Level

The most recent ACS survey (Table 5-6) reported:

- The median household income in the Waianae Region is \$59,741.
- Approximately 24% of Waianae Region residents are below the poverty level.
- The U.S. Department of Housing and Urban Development administers many public housing programs that provide housing to eligible low-income families. An adjusted gross income of 30% is one threshold for determining the maximum rent an eligible household can afford to spend on rent and still have enough left over for other non-discretionary spending. In the Waianae Region, 66% of renters spend 30% or more of their income on rent.

Native Hawaiians comprise approximately one third of the State’s homeless population. The Waianae Region has the largest concentration of Native Hawaiians on Oahu and the largest population of homeless Native Hawaiians (Kupau 2017).

### Business and Employment

The U.S. Census Bureau data for the 96792 Zip Code indicates:

- In 2015, there were 307 businesses in the Waianae Region, which exceeds the annual average of 285 for the previous 10 years.
- A wide range of business sectors were represented in the 2015 regional economy. The primary types of industries included health care and social assistance, retail trade, “other services (except public administration)”, construction, accommodation, and food services (U.S. Census Bureau 2018).
- Of the 307 businesses in the Waianae Region, the majority (162) were small with fewer than five employees. There were 139 businesses with five to 49 employees. Only six businesses, including the PVT ISWMF, had more than 50 employees.
- Approximately 52% of Waianae region residents are employed.

- Waianae residents are more likely to work in the natural resources, construction and maintenance, production, and transportation and material moving sectors.
- The Waianae population travels farther for employment. The average commute time is 44 minutes.

### 5.3.2.3 PVT ISWMF Economic Characteristics

#### Labor and Wages

PVT has provided employment opportunities in the region since 1992. The number of full-time employees has risen steadily from 25 to 45 to 60 in 2005, 2015, and 2018, respectively. In 2018, there were an additional 20 temporary employees. PVT is currently one of the largest employers in the Waianae Region.

Out of PVT's 80 employees, 59 live in the Waianae Region and have shorter commute times than the average commute time of Waianae residents working outside of the Waianae Region.

The 2017 PVT ISWMF wages and national wages for similar types of jobs within the Waste and Treatment Disposal Industry are shown in Table 5-7. The PVT wages were comparable to the national wages. PVT's contribution to the economy in the form of 2017 wages was about \$4.7 million.

PVT provides on-the-job skills and safety training for their employees that would be valuable at other places of employment. The training is modified to facilitate learning at all levels of literacy.

**Table 5-7 Comparison of Waste/Treatment Disposal Industry Wages by Occupation**

Occupation (Standard Occupational Classification Code)	2017 National (\$)¹		2017 PVT (\$)²	
	Annual Mean Wage (\$)	Annual Median Wage (\$)	Annual Mean Wage (\$)	Annual Median Wage (\$)
Office and Administrative Support Workers, All Other (439199)	39,730	36,650	53,525	52,757
Construction and Extraction Occupations (470000)	51,430	46,850	50,215	49,878
Material Moving Workers, All Other (537199)	40,490	37,950	38,731	33,218
<b>Total PVT Payroll 2017 = \$4,712,074</b>				

Note: Annual wages have been calculated by multiplying the hourly mean wage by 2,080 hours.

1) USDL 2017. 2) PVT provided 2017 wage information.

## Revenues to Government

PVT is a private company generating revenue to local governments. It provides a critical service at no cost to State or CCH governments, or taxpayers. The government also avoids the significant costs associated with siting, constructing, permitting, operating, and maintaining C&D disposal and recovery operations. The State General Excise Tax (GET) collected on the PVT ISWMF tipping fees represents revenue to local government. The healthier the construction industry, the more C&D debris is accepted at the PVT ISWMF and taxed. The GET rate is 4% plus a CCH surcharge of 0.5% for a total rate of 4.5%. Table 5-8 shows the GET history for PVT ISWMF, as reported by PVT. In 2017, PVT paid \$1,133,000 in GET. PVT forecasts the GET payments would continue into the future at the values shown in Table 5-8, assuming the same volume of C&D debris as 2017 and other assumptions for inflation and tipping fees.

**Table 5-8 PVT GET Payments (2000-2030)**

	Taxes (\$1,000s)							
	Historical Years					Projected Years		
	2000	2005	2010	2015	2017	2020	2025	2030
Total GET:	292	547	664	1,246	1,133	1,238	1,525	1,754
State Portion (4%)	292	547	590	1,108	1,007	1,100	1,355	1,558
CCH Surcharge (0.5%) <sup>1</sup>	0	0	74	138	126	138	170	196

Source: PVT 2018.

Note: 1. The CCH surcharge is extended through 2030 at the 0.5% rate.

The CCH also receives revenue in the form of property tax from PVT. Historical property taxes for the PVT ISWMF parcels and the Project Site are shown in Table 5-9. In 2017, PVT paid \$59,800 in property tax to the CCH (Table 5-9). The assessed net taxable property value of a parcel is based on the land area and improvements.

**Table 5-9 PVT Property Tax Payments by Parcel (2001-2017)**

TMK Parcel	Property Tax Payments (\$1,000)				
	Year				
	2001	2005	2010	2015	2017
Existing PVT ISWMF: 8-7-021:025	11.8	22	19.2	22.3	20.5
Existing PVT ISWMF: 8-7-021:026	13.3	16.9	11.9	11.9	11.9
Project Site: 8-7-009:007	27.4	27.4	27.4	27.4	27.4
<b>Total Property Tax</b>	<b>52.5</b>	<b>66.3</b>	<b>58.5</b>	<b>49.7</b>	<b>59.8</b>

Source: CCH Public Access 2018c.

There is a solid waste disposal surcharge (HRS §342G-62) of \$0.35 per ton of solid waste paid by waste disposal facilities to the State. The surcharge is deposited into the State Environmental Management Special Fund and is used to support the HDOH Solid and Hazardous Waste Branch. The PVT surcharge in 2017 was \$97,532.

Total local government revenue from PVT in 2017 was \$1,290,332 (\$59,800 in property tax + \$1,133,000 in GET + \$97,532 in solid waste surcharge).

There are additional direct revenues to the State and CCH in the form of operations and land use permit application fees. There are no construction-related tax revenues as are typical for other developments.

### **PVT's Role in the Construction and Renewable Energy Industries**

The activities of the construction industry are especially relevant to this socioeconomic impact assessment because PVT receives and processes C&D materials generated by this industry.

In 2017, construction projects totaling more than \$8.8 billion generated more than \$4 billion to the State's GDP according to the University of Hawaii Economic Research Organization. The vast majority of this activity involves major public works projects and residential construction in Honolulu's urban core. In the short to medium terms, the ongoing Honolulu Rapid Transportation Rail project and redevelopment from Kakaako to Waikiki area will continue to generate construction revenue on Oahu. The revitalization of Hawaii's military bases (primarily on Oahu) received appropriations totaling \$311.42 million for 2019, representing a 38% increase over 2018 (Hawaii Life 2019). Various residential development projects between Aiea and Waikiki will also contribute to construction activity.

Construction was a major source of job growth in Hawaii and the Island of Oahu during the past decade. Oahu's construction industry also provided an average of 26,000 jobs during the first quarter of 2019, which is a 0.8% increase over the first quarter of 2018 and 13.9% increase since 2014. This workforce comprised of 5.4% of all jobs held by the employed labor force during this period.

Virtually all the waste from construction projects comes to the PVT ISWMF. The PVT ISWMF supports the construction industry by providing an environmentally safe and reliable location for the disposal of C&D materials at a competitive price. PVT indirectly provides employment and revenue to construction-related businesses including, waste haul truckers, heavy equipment operators, and aggregate recyclers.

The conversion of C&D materials into reusable feedstock enables the potential formation of other new businesses in Oahu's private sector. New business enterprises will likely continue to be formed in response to the opportunity to produce additional sources of renewable energy that can help support Oahu's electrical energy demands and renewable energy goals.

### **Economic Contribution of the PVT ISWMF**

The PVT ISWMF has direct, indirect, and induced economic benefits to the Oahu economy.



- Direct effects represent actual and estimated employee compensation and other expenditures of PVT in the Honolulu economy as well as the economic value of services and products from PVT operations (e.g. feedstock, aggregate).
- Indirect effects represent the impact of PVT purchasing goods and services from other local industries in the Honolulu County economy (e.g. equipment, professional and technical services, supplies).
- Induced effects reflect changes in local spending that were generated from income changes in directly and indirectly affected industry sectors (e.g. construction, renewable energy).
- Value added is a measure of the contribution to Gross Domestic Product (GDP) that is made by an individual, business, industry, or economic sector. It represents the difference between an industry's or business establishment's total output (gross receipts or sales) and the cost of its intermediate inputs (goods and services purchased from other industries).

In 2015, the economic value of the PVT ISWMF operations was calculated through the application of the IMPLAN model (Pedersen 2015). The study was completed as part of a 2015 EIS for the PVT ISWMF and measured direct, indirect, and induced impacts on Oahu's employment, labor income, and GDP. The study concluded:

- PVT ISWMF generates substantive direct, indirect, and induced economic benefits to the Oahu economy.
- The combined direct, indirect, and induced employment derived from PVT ISWMF operation in 2016 was estimated to generate about 178 full and part-time jobs in the Honolulu County and about \$9.0 million in labor income.
- PVT ISWMF contribution to Oahu's GDP was estimated to be roughly \$12.3 million in 2016.

#### **5.3.2.4 PVT ISWMF Social Characteristics**

##### **PVT Social and Community Contributions**

PVT is an active participant and contributor to the community:

- PVT scholarship program, established in 2005, has awarded more than \$930,000 to more than 260 college-bound seniors at Nanakuli and Waianae High Schools, and Kamaile Academy. PVT awards an average of 22 scholarships per year.
- PVT provides financial and volunteer support to a variety of organizations and community events, including:
  - Sports teams;
  - Community cleanup projects;
  - Robotics competitions;

- Boys and Girls Club;
  - YMCA;
  - Legal Aid Society;
  - Waianae Comprehensive Care;
  - Project Graduation and other school-based events; and
  - Wahiawa Correctional Facility.
- PVT conducts employee health and safety training. New employees receive extensive training customized to the areas of the facility where they'll work. PVT provides employees with the opportunity to learn new job skills and encourages the promotion of internal staff.
  - PVT's health and wellness program encourages healthful eating and weight loss. Employees are encouraged to use the two-mile walking path with workout stations along the perimeter of the facility.
  - PVT worked with community groups to landscape the facility with native Hawaiian and drought-tolerant plants. There is a 750-foot buffer and extensive landscaping at the entrance, site perimeter, and inactive landfill cells. PVT also worked with the U.S. Navy and used crushed rock and concrete from the landfill to create a 1/4-mile berm on the shoulder of the road to prevent illegal parking and reduce dust.
  - PVT provides a convenient and environmentally safe alternative to illegal dumping.
  - As Oahu's designated disposal point for emergency debris in the event of a natural disaster, clearing the roads to the PVT ISWMF would be a priority and benefit nearby residents.

### **Public Outreach and Community Feedback**

PVT has welcomed the opportunity to share information about its business with the public. PVT maintains open lines of communication and public outreach activities, which have included the following:

- Maintain an informative website (<http://www.pvtland.com/contact-us/>), with a phone number specifically for the public to report a concern. PVT responds promptly.
- Submit a full page "newsletter" of PVT involvement in the community for publication in the Westside Stories, a community newspaper with a circulation of 15,500 readers.
- Present annual updates to the Nanakuli-Maili Neighborhood Board.
- Invite groups and individuals to tour the facility, including the students shown in the photo (right).



*Student Tour of PVT ISWMF*

EIS outreach activities include:

- Nanakuli-Maili Neighborhood Board presentation on January 15, 2019. The Board voted unanimously to support the Proposed Action in concept, with final approval pending review of the EIS.
- Host a public Open House at the PVT ISWMF on February 23, 2019 to present and answer questions about the Proposed Action.
- Interviews with the community regarding cultural resources (Section 5.2, *Cultural Resources*).
- Puu Heleakala Community Association Presentation on March 26, 2019.
- Nanakuli-Maili Neighborhood Board presentation on July 16, 2019.
- The August 20, 2019 Nanakuli Neighborhood Board Meeting and September 4, 2019 Special Meeting with testimony from 70+ individuals and organizations, both in favor of and in opposition to the Proposed Action. The Board voted 5-3 to accept the following resolution: **The Board supports PVT's efforts in their recycling efforts and service to our community, however, the NB#36 opposes their request for relocation, as stated in their Draft EIS statement and urges entities, especially, City, State and Federal governments to assist PVT in their efforts to find a suitable location as they help our State achieve a zero waste society.**

Community feedback during the EIS outreach included appreciation for and acknowledgement of PVT's:

- Public outreach efforts.
- High standards for waste management.
- Renewable energy and waste diversion practices.
- Community support and scholarship program.
- Providing high quality jobs for west side residents.
- Zero-tolerance for haul truck speeding on Lualualei Naval Road.

Key concerns expressed by the community are listed in Table 5-10.

**Table 5-10 Key Concerns and Mitigation Measures**

Concern	Relevant EIS Section	Summary of Mitigation Measures
The inequitable burden placed on the economically disadvantaged Waianae population relative to other communities for hosting undesirable land uses that benefit all of Oahu.	Section 5.3, <i>Socioeconomic and Land Use Characteristics</i>	N/A
Proximity of landfill to residential and commercial areas.	Section 2.5.2.2, <i>Setbacks</i> and Section 6.3.2.3, <i>LUO Article 5, Specific Use Development Standards</i>	<p>PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the CCH LUO (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's SWMP. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.</p> <p>Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, <i>Description of the Proposed Action</i>. The measures have been proven to be effective at the PVT ISWMF.</p>
Effects of fugitive dust on the health of the community.	Section 3.5, Air Quality	<p>PVT would implement dust control measures to minimize fugitive dust, including but not limited to:</p> <ul style="list-style-type: none"> <li>▪ pave and regularly clean permanent access and haul roads;</li> <li>▪ apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;</li> <li>▪ apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;</li> <li>▪ landscape closed portions of the landfill area;</li> <li>▪ apply soil cement to unused portions of the landfill area;</li> </ul>

Concern	Relevant EIS Section	Summary of Mitigation Measures
		<ul style="list-style-type: none"> <li>maintain a 750-foot buffer zone along the southern property boundary;</li> <li>install a dust screen along the southern property boundary;</li> <li>maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;</li> <li>install and maintain a wheel wash to clean the tires of trucks leaving the site; and</li> <li>periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.</li> </ul>
Concern about the types of waste accepted by PVT (e.g. asbestos, hazardous waste)	Section 2.4.1, <i>PVT ISWMF Materials Acceptance and Disposal</i>	PVT does not accept hazardous wastes, as defined by State and Federal regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's SWMP and applicable State and Federal laws. No ACM disposal area is proposed for the Project Site.
Obstruction of culturally-significant view planes and impacts to cultural landforms.	Section 5.2, <i>Cultural Resources</i> and Section 5.4, <i>Scenic Resources</i>	<p>Mitigation measures to minimize and avoid impacts to the visual character of the community include the following:</p> <ul style="list-style-type: none"> <li>The maximum landfill grades would be limited to 255 feet amsl located in the northeastern portion of the Project Site</li> <li>Preserve views toward Hina's Cave from the surrounding area.</li> <li>Prior to the first landfill cell development, a 15 to 25 foot "grassed shield berm" would be created along the edge of the cell to shield the debris disposal activities from the community's view.</li> <li>A <i>Landscaping Plan</i> (Appendix I) will be implemented, including grassed berms, green dust screen, and 25-foot-tall trees along the perimeter.</li> <li>The debris management operations (e.g., MRD-2 and MRD-3, renewable energy facilities) have intentionally been sited north</li> </ul>

Concern	Relevant EIS Section	Summary of Mitigation Measures
		<p>on the Project Site, away from the residential land uses south of the Project Site.</p> <ul style="list-style-type: none"> <li>▪ The facilities sited at the southern end (e.g., office trailers, weigh station), would have a low profile.</li> <li>▪ The increases in height would be incremental over 30 years.</li> <li>▪ The planned PV system would be designed to maximize efficiency and minimize potential for glint and glare visual impacts.</li> <li>▪ The amount of bare soil exposed at one time would be kept to a minimum. Slopes of the filled landfill cells would be seeded with fast-growing grass as soon as practicable.</li> <li>▪ The Proposed Action would operate during daytime hours only. The minimal lighting onsite will be directed downward and/or shielded.</li> </ul>
Protection of Lualualei's ground and surface water quality.	Section 3.4, <i>Water Resources</i>	<p>PVT operations would minimize the volume of leachate (Section 2.5.3.1, <i>Leachate Management</i>). Leachate would be managed and retained onsite through a LCRS.</p> <p>The impermeable liner (described in Section 2.5.3.2, <i>Landfill Liner</i>) would be installed beneath the landfill waste layer to prevent leachate from entering the soil and groundwater below.</p> <p>Groundwater and leachate would be tested regularly per PVT's <i>Groundwater and Leachate Monitoring Plan</i>, which is a requirement of the facility's SWMP.</p> <p>The stormwater management system (Section 2.5.3.3, <i>Stormwater Management [Site-wide]</i>) would divert stormwater away from the active landfill cells and around the perimeter of the landfill. BMPs for erosion control and stormwater management protocols would minimize sediment and pollutants in stormwater runoff. PVT will test stormwater discharge per their revised NPDES permit.</p>



Concern	Relevant EIS Section	Summary of Mitigation Measures
Lack of alternative locations retained in the EIS.	Section 2.7, <i>Alternatives to the Proposed Action</i>	N/A
Loss of open space and agricultural land.	Section 5.3, <i>Socioeconomic and Land Use Characteristics</i> and Section 6.2.2.7, <i>Agricultural Productivity Ratings</i>	<p>No permanent or multistory buildings are proposed. The operations would be generally shielded from public view by topography, landscaping, fencing, and berms covered in vegetation (See visual mitigation measures above).</p> <p>In the long-term, when the Proposed Action reaches permitted capacity and is closed, the open space character of the Project Site would be restored. Operational facilities, equipment and office trailers would be removed. The reuse development potential would be limited to structures with shallow footing (one story). Therefore, rural open space character will be preserved for future generations.</p> <p>Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing.</p>
Negative impacts to surrounding agricultural uses.	Section 5.3, <i>Socioeconomic Resources and Land Use Characteristic</i>	<p>Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, <i>Description of the Proposed Action</i>. The measures have been proven to be effective at the PVT ISWMF.</p>
Speeding truck drivers and the maintenance of Lualualei Naval Road.	Section 4.1, <i>Transportation</i>	<p>PVT does not propose to increase their permitted limit of up to 300 waste haul trucks per day. PVT policies include the following measures to minimize traffic impacts to the community:</p> <ul style="list-style-type: none"> <li>Adhere to the operating hours (Section 2.5.8, <i>Hours of Operation</i>).</li> <li>No early arrivals. Repeat offenses would result in revoking the driver's access privileges.</li> </ul>

Concern	Relevant EIS Section	Summary of Mitigation Measures
		<ul style="list-style-type: none"> <li>▪ Turn off diesel engines while waiting in line to minimize the noise and diesel odor emissions.</li> <li>▪ Adhere to posted speed limits both on- and off-site.</li> <li>▪ Encourages community members to call their office to report speeding trucks. PVT penalizes speeding drivers and will suspend repeat offenders from the site, if necessary.</li> <li>▪ Coordinate with the Navy to maintain and repair Lualualei Naval Road.</li> </ul>
Impacts to native fauna and flora.	Section 3.7, <i>Biological Surveys</i>	<p>Although it is improbable that the Project Site habitat could be used for Short-eared Owls nesting, a qualified biologist will conduct a nesting Short-eared Owl survey of the Project Site immediately prior to clearing and grading.</p> <p>The Proposed Action would only operate during daytime hours and no nighttime construction is anticipated. However, if night lighting is required, PVT would shield all lights and/or place lights high enough to be pointed directly at the ground to minimize impacts to nocturnally flying seabirds.</p>
Excess Noise.	Section 3.6, <i>Noise</i>	<p>PVT's policies to minimize noise impacts would include the following:</p> <ul style="list-style-type: none"> <li>▪ Require all site-owned and customer-owned vehicles traveling internally on the site to be operating with fully functional mufflers and in a state of good repair.</li> <li>▪ Encourage quiet operating techniques and practices.</li> <li>▪ Maintain the commonly traveled roads to keep a smooth evenly sloped surface free from major bumps and potholes that cause noise when traveled over.</li> <li>▪ Grade all roads at a low enough slope that they do not require excessive throttle to navigate.</li> <li>▪ Post signage to inform drivers of "no engine braking" and "no horn unless emergency" areas close to noise critical areas.</li> </ul>

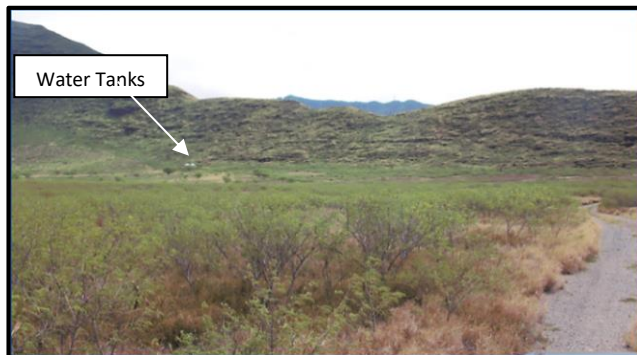
### 5.3.2.5 Land Use Characteristics

#### Land Uses in the Vicinity of the Project Site

The Project Site is currently open space with grass and koa acacia trees. Based on a windshield tour from accessible roadways in October 2018, the following land use characteristics were observed at and adjacent to the Project Site. Figure 5-9 shows general land uses observed in the vicinity.

■ East and North (see photo insets):

- To the east and north of the Project site is the Puu Heleakala ridge's western slope (TMK: 8-7-009:001). East of the slope is the Puu Heleakala ridge. Leeward Land Company, Ltd. owns the parcel.
- Further east, beyond the Puu Heleakala ridge, is Nanakuli Valley. The land uses in Nanakuli Valley (e.g., residential and community support) are topographically segregated from the Project Site.
- To the north of the project site is the continuation of the Puu Heleakala slope. It slopes west toward Lualualei Naval Road.
- Further north, beyond the Puu Heleakala slopes, is a 263-acre parcel formerly owned by Tropic Land, LLC and currently owned by MA'O Organic Farms (TMK: 8-7-009:002). Beyond this is the Lualualei Annex.



*View from Lualualei Naval Road facing east towards the Project Site. Water tanks at the base of Puu Heleakala.*



*View from the water tanks looking north across the Project Site with slope of Puu Heleakala in middle ground.*

■ West:

- The western boundary of the Project Site is bordered entirely by Lualualei Naval Road. It is the primary access to the Lualualei Annex. Lualualei Naval Road is not a public thoroughfare and traffic is generally limited to military and truck traffic. Most parcels on the western edge of Lualualei Naval Road are accessed from alternative roadways.
- To the northwest, beyond the PVT ISWMF, is West Oahu Aggregate (TMK: 8-7-021:035). They operate an asphalt and concrete crushing operation to make aggregate (at the former Kaiser Cement Plant site), and a trucking business.
- The land uses northwest and west of PVT ISWMF are predominantly rural residential and agriculture.
- To the southwest of the Project Site is the PVT ISWMF's eastern property boundary, aligned along Lualualei Naval Road (see photo inset).



*View from the Project Site water tanks facing southwest towards Lualualei Naval Road. PVT ISWMF and Puu O Hulu Kai in the background.*

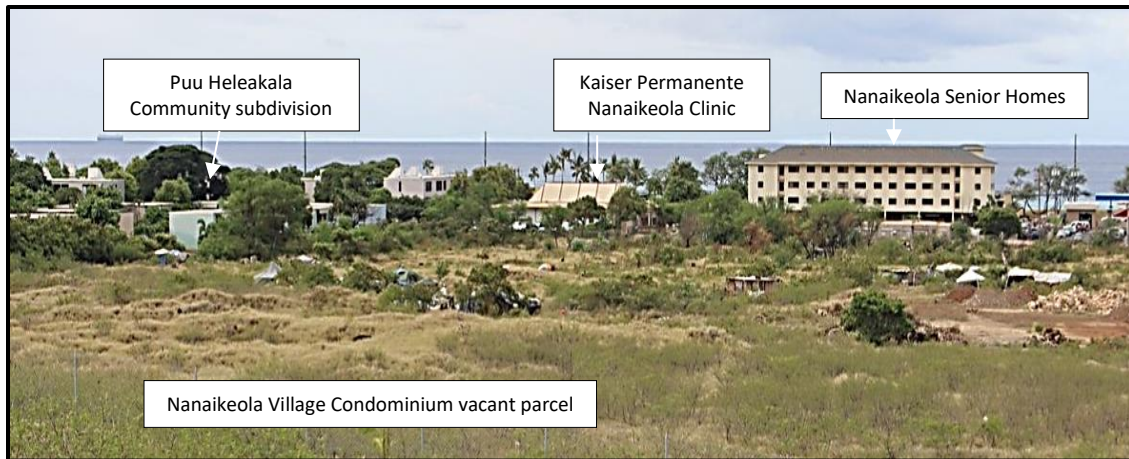
■ South (see photo inset):

- Land use to the south of the Project Site is residential with community support facilities interspersed in the community. The land use shifts from residential to primarily commercial and business along Farrington Highway.
- South and adjacent to the Project Site is an 18.2-acre vacant lot owned by Green Homes Lualualei II, Inc. (TMK: 8-7-008:077). It extends from the Project Site's southern boundary along Lualualei Naval Road to the Pacific Shopping Mall on Farrington Highway. There is a small cluster of single-family residences in the parcel along Lualualei Naval Road; the cluster is not adjacent to the Project Site. Residential development is planned for this parcel (Table 5-11 see Project # 1 Green Homes Lualualei II, and Figure 5-9).
- South and adjacent to the Project Site is a 12.3-acre parcel owned by Nanaikeola Village Condominium (TMK: 8-7-008:076). It is located east of the Green Homes Lualualei II, Inc. parcel. It is undeveloped, overgrown with vegetation, and a homeless encampment was observed in the parcel. The development is identified as a planned project in Table 5-11, Project #7.
- To the south of the Nanaikeola Village Condominium parcel is the Kaiser Permanente Nanaikeola Clinic and the Nanaikeola Senior Apartments which are located near Farrington Highway.
- Southeast of the Project Site and east of the Nanaikeola Village Condominium parcel is the Puu Heleakala Community subdivision. These residential units adjacent to the Project Site are 3-story townhomes. The nearest residence is approximately 60 feet from the Project Site boundary. The townhomes are accessed from Helelua Street, which intersects with Farrington Highway.



*Zoomed-in view from the Project Site facing southwest.*





*View from the Project Site facing south.*



*Zoomed-in view from the Project Site facing south towards the nearest Puu Heleakala Community subdivision home.*

In addition to the land uses described above, there are six DHHL-owned parcels in the vicinity of the Project Site (Figure 5-11):

- Princess Kahanu Estates
- Nanakuli Hawaiian Homestead
- Nanakuli Upper Valley
- Nanakuli Village Center
- Former Nanaikapono School Site
- Nanakuli Ranch



On March 10, 2019, a brush fire burned 500 acres of land including portions of the Project Site and areas to the south. Much of the vegetation observed in these photos was destroyed.

### **Planned Land Use**

This section assesses potential land use in the vicinity of the Project Site. Planned land development projects are listed in Table 5-11 and shown on Figure 5-9. The sources of the data included publicly available information: news media, neighborhood board meeting records, and TMK parcel data.

Four of the projects are priority projects in DHHL's *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nanakuli* (2009): Nanakuli Village Center (#3), Street Repairs and Maintenance for Health and Safety in the Region (#9), Farrington Highway Transportation Corridor Coordination and Improvements (#10), Cemetery Repair and Expansion (#11), and Identify and Plan Community Use Areas (#12).

Three of the projects are transportation projects and their completion dates are undetermined due to funding issues or lack of agreement on preferred alignment. However, they are included because they are regionally important projects that could potentially be aligned adjacent to the Project Site.

Waianae Coast Emergency Access Road (Project 2) and the Waianae Coast Parallel Road ("secondary road") (Project #6) are often discussed together as they share roadway segments. The emergency access route was designated for occasional emergency use. The parallel roadway project is intended to provide a permanent road available all the time as an alternative to Farrington Highway, including portions of the emergency access road. Figure 5-9 identifies some of the segments that have been proposed near the Project Site but are subject to change.

Two residential developments (Project #1 and #7) are proposed south of the Project Site. MA'O Organic Farms (Project #8) proposes agricultural use of the former Tropic Lands, LLC parcel, located north of the Project Site. The land has been acquired and MA'O Organic Farms representatives were interviewed in the CIA (Section 5.2, *Cultural Resources*).

**Table 5-11 Planned Land Use Changes**

#	Project Name and Description	Type	Status	Proponent
1	Green Homes Lualualei II. Affordable single-family homes on the parcel adjacent and south; on the eastern edge of Lualualei Naval Road. <sup>1</sup>	Residential	Land acquisition complete and site planning and permitting is underway.	Green Homes Lualualei II, Inc.
2	Waianae Coast Emergency Access Road would provide the geographically isolated Waianae Region an emergency exit route and an alternative to Farrington Highway. The route includes privately-owned roadways that are gated and accessible only in the event of an emergency. The project has been discussed for over 20 years.	Transportation	In 2018, CCH appropriated \$3 million for land acquisition, planning, and design for an extension of the route <sup>2</sup> .	CCH Department of Emergency Management
3	Nanakuli Village Center: (TMK: 8-7-008:077). <sup>3</sup>	Residential/Community	In progress.	DHHL/Hawaii Community Development Authority
	<ul style="list-style-type: none"> <li>Commercial Center: retail, a health center, and dialysis clinic.</li> </ul>	Community	Estimated Completion 2019.	
	<ul style="list-style-type: none"> <li>Agnes B. Cope Learning Center (Community Center).</li> </ul>	Community	Estimated Completion 2019.	
	<ul style="list-style-type: none"> <li>Hale Makana O Nanakuli (48 Affordable Rental Housing Units).</li> </ul>	Residential	Completed 2018.	
4	Leeward Bikeway <sup>4</sup> within former Oahu Railroad and Land Company's right-of-way. Phase I: Waipahu Depot Rd to Philippine Sea Rd. Phase II: Waipio Point Access Rd. to Lualualei Naval Rd.	Transportation	Phase I: funded. Phase II: pending funding for land acquisition.	HDOT
5	PVT ISWMF Closure. (TMK 8-7-009:025; 8-7-021:035). Beneficial land use options are being considered.	Commercial/Open Space	Final closure dependent on C&D landfill reaching maximum permitted capacity.	PVT
6	Waianae Coast Parallel Road <sup>2,5</sup> is an alternative to Farrington Highway to be accessible at all times. Segments of the Waianae Coast Emergency Access Road and Waianae Coast Parallel Road overlap. One segment being considered	Transportation	In 2016, \$3 million was approved by the State legislature for a secondary access road. These funds were matched by the	DHHL/HCDA

#	Project Name and Description	Type	Status	Proponent
	is aligned along the southern boundary of the Project Site that would connect Lualualei Naval Road and Haleakala Avenue.		County (See Project 2). In January 2019, the segment along PVT's boundary was not supported by the neighborhood board <sup>5</sup> .	
7	Nanaikeola Villages (TMK:8-7-008:076) <sup>6</sup> Master-planned community to include self-help, single-family homes, duplexes, possibly a multi-family complex for seniors, and a child's daycare center. 33 units are designated in the TMK record.	Residential	Land acquired.	Hawaii Intergenerational Community Development Association
8	MA'O Organic Farms representatives presented plans to expand their farming operations to the former Tropic Lands, LLC parcel (TMK: 8-7-009:002). <sup>7,8</sup> MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and plans to develop the parcel into a working farm and affordable, farm-worker housing project.	Agriculture	Land acquired.	MA'O Organic Farms
9	Street Repairs and Maintenance for Health and Safety in the Region <sup>9</sup> . Improvements to crosswalks, sidewalks and other measures to improve pedestrian safety within DHHL homesteads and along Farrington Highway.	Transportation	In progress.	DHHL
10	Farrington Highway Transportation Corridor Coordination and Improvements <sup>9</sup> . DHHL coordination of ongoing Farrington Highway corridor improvements.	Transportation	In progress.	DHHL
11	Cemetery Repair and Expansion <sup>9</sup> . Planning and development of the new site for the Nanakuli Cemetery.	Community	In progress.	DHHL
12	Identify and Plan Community Use Areas <sup>9</sup> . Planning to identify community use areas.	Community	In progress.	DHHL

Sources: 1) Nanakuli-Mailii Neighborhood Board 2018. 2) KITV 4 2016. 3) Hawaii Community Development Board 2018. 4) Hawaii Bicycling League 2018. 5) KITV 4 2017. 6) CCH 2019b. 7) Nanakuli-Mailii Neighborhood Board 2019. 8) CSH 2019. 9) DHHL 2009.

### **5.3.3 Impacts**

#### **5.3.3.1 Proposed Action**

##### **Population and Demographics**

The Proposed Action would have no short- or long-term, direct or indirect impacts on the Waianae Region's population trends or distribution, household demographics, or housing. The Proposed Action would not increase or decrease the number of residents that move in and out of the Waianae Region.

##### **Economy, Employment, and Government Revenues**

The Proposed Action would have long-term, direct, indirect, and induced economic benefits to the Oahu economy.

Direct benefits include the continued employment of up to 80 employees. Although the Proposed Action would not increase the number of employees, approximately 20 temporary positions would be converted to full-time, permanent positions. The new, skilled positions are necessary to operate the additional MRD unit, heavy equipment, and the renewable energy system. PVT would continue to provide competitive wages and valuable on-the-job skills and safety training.

The Proposed Action would continue to provide tax payments to the State and CCH.

There would also be a direct benefit from the economic value of the products and services provided by PVT. With an additional MRD unit, PVT would increase feedstock production from approximately 800 tons per day to 1,600 tons per day. The increased processing power of two MRD units would maximize the diversion of materials from the landfill and, as a result, increase recyclables and aggregate. The anaerobic digestion system would create digestates that can be used as fertilizer for fuel crops. The sale of these products provides a direct economic benefit.

Indirect benefits include the impact of PVT purchasing goods and services from other local industries. The anaerobic digestion system would utilize approximately 45 tons per day of fuel crops, which would be sourced on-site and from local farms. PVT would continue to locally source equipment, professional and technical services, and supplies to the extent practical.

Induced effects include changes in local spending that were generated from income changes in the construction and renewable energy industries. For every PVT job, 1.38 additional jobs in the island economy would be supported and for every \$1 earned by PVT employees, others in the economy earn an additional \$1.02, based on 2012 published multipliers for the industry (DBEDT 2016). PVT

ISWMF contribution to Oahu's GDP was estimated to be roughly \$12.3 million in 2016. The Proposed Action would continue to have a beneficial, value-added impact on Oahu's GDP.

The Proposed Action would have no impact on Oahu's economic or employment in the short-term, during construction.

### **Social and Community Contributions**

With the Proposed Action, PVT would continue to have a long-term, direct and indirect, beneficial impact to the community. PVT operations would continue to provide responsible C&D debris management and a convenient alternative to illegal dumping. PVT would continue to provide financial and educational support to the community and responsiveness to community concerns. The Proposed Action is unlikely to change public perception of PVT operations.

The Proposed Action would have no impact on social or community contributions in the short-term, during construction.

### **Land Use Characteristics**

The Proposed Action would have no short- or long-term, direct or indirect impact on the planned land use changes identified in Table 5-11 and shown on Figure 5-9. The Proposed Action would be compatible with current and future land uses in the vicinity of the Project Site and is not expected to encourage or discourage changes in land use in the Waianae Region. Anticipated changes in land use will occur with the development of the projects planned by various public and private agencies (Table 5-11). Section 7.1, *Cumulative Impacts* assesses the potential for cumulative impacts related to these projects relative to other resource areas.

The Proposed Action would change the Project Site land use from vacant to a PVT ISWMF. There would be a loss of open space. The impact would be mitigated to less than significant adverse impact with implementation of the measures described in Section 5.4, *Scenic Resources* and Section 2.5, *Description of the Proposed Action*. The proposed PVT ISWMF operations would be screened from public view by topography, setbacks, and perimeter vegetation. Section 5.4, *Scenic Resources* includes visual renderings of the Proposed Action. When the facility is closed, the open space characteristics would be restored.

No further mitigation is warranted.

#### **5.3.3.2 No Action Alternative**

The No Action Alternative would have no direct or indirect impact on population trends, demographic characteristics, housing, or health of the residential population of the Waianae Region.

The No Action Alternative would have significant adverse impacts on employment, fiscal revenues, and contributions to Oahu's economy. The PVT ISWMF would close and approximately 80 jobs, \$1.3 million in CCH government revenues, and \$1 million in community philanthropic

contributions would be lost. The direct, indirect and induced contributions of the PVT ISWMF to Oahu's economy would cease.

The CCH would need to identify and invest in an alternative C&D debris management solution to replace PVT operations. No alternatives have been identified but they could include: expanding an existing landfill, siting a new landfill, investing in new technology; paying for off-island shipment; or a combination of options. If the alternative solution does not divert waste from landfilling to the extent that PVT does, then the adverse economic impacts could be exacerbated by the shortened lifespan of the new C&D landfill or the increase in volume and costs to ship more waste off-island. There would also be a significant adverse impact to the CCH's disaster preparedness and response.

There would be no development of the Project Site and no impact to land use or open space.

### 5.3.4 Summary of Impacts and Potential Mitigation

The Proposed Action would have no short- or long-term, direct or indirect impact on the population or demographics of the Waianae Region. The Proposed Action would have short- and long-term, direct and indirect beneficial impacts on Oahu's economy, employment, and social contributions in the Waianae Region. The Proposed Action would be a permissible change in land use. The loss of open space would be a less than significant adverse social impact.

The No Action Alternative would have significant adverse impacts on Oahu's economy, employment in the Waianae Region, State and CCH fiscal characteristics, and social and community contributions. There would be no development of the Project Site and no impact to land use or open space.

**Table 5-12 Socioeconomic Resources and Land Use Characteristics Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Population and demographics	0	0	0	0	none	0	0
Impacts on Oahu's economy and employment in the Waianae Region	0	0	+	+	none	-	-
State and CCH fiscal characteristics	0	0	+	+	none	-	-
Social and community contributions	0	0	+	+	none	-	-
Compatibility with existing and planned adjacent land use	0	0	0	0	none	0	0
Loss of open space	<	<	0	0	none	0	0



*Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.*

## 5.4 Scenic Resources

This section presents the methodology, existing conditions, and potential impacts of the Proposed Action and No Action Alternative on scenic resources.

### 5.4.1 Methodology

The following tasks were completed by Hart Crowser:

1. Desktop study of:
  - a. Existing CCH and State community plans for “identified” or documented scenic views within the vicinity of the Project Site.
  - b. The visual impact assessment completed for PVT ISWMF as part of a 2015 EIS (LYON 2015) to identify previously studied view planes and Key Observation Points (KOPs).
  - c. Topography and Google earth imagery to identify additional public locations in which the Proposed Action might be visible to the community (e.g., parks, Farrington Highway, gathering places, nearby residential areas).
2. Conducted a visual field survey on October 25, 2018 to confirm and document scenic views identified in Task 1. High-resolution photographs were taken from locations with uninterrupted views to the Project Site and where the Proposed Action at maximum elevation may be visible, called line-of-sight views (i.e., KOPs). Figure 5-10 shows the location of and direction that each photo was taken.
3. Jeff Brink, Inc. used a Zone of Visual Influence (ZVI) model to generate computer renderings of the Proposed Action from the KOPs. The ZVI model relied on information from a digital elevation model of the Proposed Action and PVT ISWMF at maximum elevations (255 feet amsl) and line-of-sight photographs taken during the visual field survey (between KOPs and the Project Site). The Autodesk 3ds Max professional 3D computer graphic program was used to develop the ZVI Model and rendered images. Several renderings showed that the Proposed Action would not be visible and were thus dismissed. Through this process, six KOPs were identified where the Proposed Action may be visible. The KOPs are described in Section 5.4.3, *Impacts* and shown in the Scenic Photo Log (Photos 1-17).
4. Prepared this visual impact assessment, including a photolog of existing conditions and renderings of future conditions.

**“Key Observation Point (KOP)”**: Public places in which the Proposed Action would be visible to the community. KOPs include trafficked roadways, public gathering places, and medium density residential and commercial areas.

### **5.4.2 Existing Conditions**

Scenic resources are natural or man-made attributes of a landscape that contribute to the visual character and visual quality of a place. Attributes used to determine visual character include significant views or vistas, landscape character, perceived aesthetic and/or cultural value, uniqueness, and extent to which they are visible to surrounding viewers (e.g., foreground versus background). Attributes used to determine visual quality are described in terms of sensitive receptors, which include areas with high scenic quality (i.e., CCH and State designated scenic corridors or locations), areas where high concentrations of people may be present (i.e., parks or recreational areas), and/or important historic or archaeological locations.

#### **5.4.2.1 Visual Features**

The landscape of Lualualei is made up of rugged mountain ridges, an expansive valley, and white sand beaches along the Pacific Ocean. Puu Heleakala, the Waianae Mountains, Puu o Hulu Kai, and Puu o Hulu Uka are the dominant visual features and are visible from multiple viewpoints in the valley.

The Project Site is located on the lower slopes of Puu Heleakala and is vacant, except for a few above-ground features that support the PVT ISWMF, as described in Section 2.3, *Project Site Characteristics*. Buffelgrass and kiawe trees are the predominant vegetation at the Project Site and growth extends to the vacant areas north, east, and south. The elevation of the Project Site varies from 50 feet amsl in the southwestern portion of the site to 350 feet amsl in the northeastern portion, and slopes downward from east to west. Section 5.3, *Socioeconomic Resources and Land Use Characteristics* includes Project Site photos.

#### **5.4.2.2 Documented Scenic Views in the Vicinity of the Project Site**

Hart Crowser referenced the WSCP (DPP 2012) and CCH's Department of Land Utilization Coastal View Study of 1987 (CCH 1987) to assess "identified" scenic views (i.e., views noted in CCH or State plans and studies) in the vicinity of the Project Site.

The WSCP identifies "open space and important views" as cultural resources to be protected. Important viewpoints in the Waianae District include:

- Outdoor community gathering places, including parks, where scenic vistas or view planes are appreciated by large numbers of people.
- Significant road views.
- Dramatic mountain views.
- Special views from higher elevations looking toward the coast, including views from the scenic overlook near Kolekole Pass. Kolekole pass is located on military property and only available to the public on select weekends.
- Large unlit open spaces in the back of the valleys that are susceptible to light pollution.

No outdoor community gathering places or significant road views were identified in the WSCP from which the Project Site or Proposed Action would be visible (DPP 2012). The Project Site is not visible from the Kolekole Pass overlook nor is it in the view plane of the large-scale open valley lands or dramatic mountain views of Lualualei.

The Coastal View Study of 1987 (CCH 1987) is an inventory of significant coastal views and coastal landforms which together make up the shoreline scenic resources on Oahu. The scope was generally focused on views of the ocean, shoreline, and coastal landforms while driving along Farrington Highway. The study divided the coastline into “viewsheds” and the Project Site is located within the Nanakuli viewshed, designated between Kahe Point and Maile Point. The only “significant stationary view” identified in the Nanakuli viewshed was from Kahe Point toward the ocean, which is not in the vicinity of the Project Site. Significant “lateral” views along the coastline toward Kaena from Farrington Highway were identified in the Nanakuli viewshed. The significance was due to the descending ridges that can be seen in the distance, including Puu Heleakala and Puu O Hulu Kai. The Project Site is not within these significant lateral view planes.

The view from Hina’s Cave (located on the slope of Puu Heleakala at 600 feet amsl) to Maui Rock (located in the Garden Grove Condominium Complex) was also identified as an important cultural view plane.

#### **5.4.2.3 Project Site Visibility**

A visual field study was undertaken to identify views from within the community that were not documented in a government study or report. The study was limited to public roads that are travelled frequently. The Project Site is not visible from most public roadways due to the intervening built environment, topography, distance, and vegetation.

The residential and commercial developments along Farrington Highway obstruct, or greatly diminish, drivers’ views into the valley. Much of the residential and commercial development along Farrington Highway is in poor condition and further detracts from the scenic qualities of the area. However, the intersecting roadways that extend into the valley provide views of the Waianae Mountain range and other notable land forms.

The following summarizes the typical obstructed views from various nearby public locations:

- From the South: Puu Heleakala Community subdivision is at a lower elevation than the Project Site. The topography obstructs views to the interior of the Project Site (Photos A and B). Views to the Project Site from Farrington Highway are often obstructed by the intervening built environment (Photo C).
- From the East: Puu Heleakala borders the Project Site to the East and obstructs views from Nanakuli Valley to the Project Site.
- From the North: Puu Heleakala borders the Project Site to the North and obstructs views from parcels further north. Views from Lualualei Naval Road approaching the Project Site from the

north are obstructed by the higher elevation of the Project Site, as shown in Photo D taken at the intersection of Lualualei Naval Road and Paakea Road.

- From the West: The PVT ISWMF is at a higher elevation than the Project Site and obstructs views from most parcels west of PVT ISWMF to the Project Site.

Six observation points in the community were identified for further visual analysis that included renderings of the Proposed Action. These KOPs were selected based on the potential for the Proposed Action at final landfill height to be viewed by numerous people and with regular frequency. None of these KOPs are recognized gathering places or parks. The intent was to qualitatively assess the impact of the Proposed Action on the aesthetic quality of the environment as viewed from public locations within the community. The KOPs and findings are described in Section 5.4.3, *Impacts*.

The traffic passing the Project Site on Lualualei Naval Road, especially in the northbound direction, have unobstructed views to the Project Site. However, these views were excluded from the KOP impact analysis because the traffic is light, generally limited to Lualualei Annex and commercial truck traffic, and the road is not a thoroughfare for the community.

### **5.4.3 Impacts**

Visual impacts were measured in terms of the project's physical characteristics and potential visibility, including the degree to which the Proposed Action would change the existing visual character and quality of the environment.

"Significant effect" to scenic resources is broadly defined in HAR §11-200-12 Significance Criteria, as actions that "substantially affects scenic vistas and view planes identified in county or state plans or studies."

#### **5.4.3.1 Proposed Action**

The Proposed Action would provide no short- or long-term, direct or indirect impact on documented scenic resources because no CCH or State identified scenic vistas and view planes are located on or within the vicinity of the Project Site. The Proposed Action is consistent with the WSCP (DPP 2012) because there would be no effect to scenic views from community gathering places, dramatic mountain views, views from Kolekole Pass or significant roadways.

A visual assessment was completed for six KOPs where the Proposed Action would be visible and potentially impact the visual character and quality of the community. The assessment assumes the mitigation measures described in Section 2.5, *Description of the Proposed Action* would be implemented to minimize and avoid impacts to the visual character of the community. The measures include the following:

- Prior to the first landfill cell development, a 15 to 25 foot "grassed shield berm" would be created along the edge of the cell to shield the debris disposal activities from the community's view.

- A Landscaping Plan (Appendix I) for the Proposed Action will be implemented, including grassed berms, green dust screen, and 25-foot-tall trees along the perimeter.
- The debris management operations (e.g., MRD-2 and MRD-3, renewable energy facilities) have intentionally been sited north on the Project Site, away from the residential land uses south of the Project Site. The facilities sited at the southern end (e.g., office trailers, weigh station), would have a low profile. Views from the residential communities will be further mitigated by the buffer and landscaping on the southern boundary of the Project Site.
- The maximum landfill grades would be limited to 255 feet amsl located in the northeastern portion of the Project Site to minimize visual impacts and to preserve views toward Hina's Cave from the surrounding area. The increases in height would be incremental over 30 years.
- The planned PV system would be designed to maximize efficiency and minimize potential for glint and glare visual impacts to neighboring properties and KOPs. The topography would obstruct views from the surrounding communities.
- Because exposed dirt would make the landfill more noticeable from a distance, the amount of bare soil exposed at one time would be kept to a minimum. Slopes of the filled landfill cells would be seeded with fast-growing rye grass as soon as practicable as a visual and erosion control best management practice. Based on PVT ISWMF's experience, the natural grassy vegetation (e.g., buffelgrass) that is currently predominant at the Project Site and adjacent properties would take over and the landfill slopes would visually blend into the Puu Heleakala backdrop.
- The Proposed Action would operate during daytime hours only. The minimal lighting onsite will be directed downward and/or shielded, as recommended in the WSCP (DPP 2012).

The Scenic Resources Photo Log at the end of this section includes a location map of the six KOPs (Figure 5-10). Computer-rendered views of the Proposed Action and the PVT ISWMF at maximum elevations (255 feet amsl) are shown on Photos 1-17. The impacts of the Proposed Action on visual resources will change incrementally over the life of the landfill until maximum capacity is met and it is officially closed. The renderings represent the end of the landfill lifespan and maximum design elevations. "Short-term" impacts would be less visible and are not rendered.

Two photos are provided for each KOP: 1) a rendering of the Proposed Action in gray shading, for emphasis and 2) a rendering of the Proposed Action in green shading, representing established vegetation. When relevant to the view, the photos include renderings of the MRD-2 and MRD-3 and renewable energy systems (gasification system or anaerobic digestion system and PV system). The photos include the upper limits of Puu Heleakala ridge to demonstrate potential impacts on views to the significant landform and Hina's Cave.

The six KOPs and potential Proposed Action impacts are described, as follows:

- **KOP 1:** Nanaikeola Street two locations: 1) intersection of Farrington Highway and Nanaikeola Street, which is 1,800 feet south of the Project Site (Photos 1 and 2), and 2) at the northern end of Nanaikeola Street adjacent to the Nanaikeola Senior Apartments and 1,400 feet south of the Project Site (Photos 3 and 4). The rendered views show that the proposed landscaping along the southern boundary of the Project Site would blend the landfill slopes with the natural surroundings. The Proposed Action would not obstruct the view of Puu Heleakala or Hina's Cave. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.
- **KOP 2:** Lualualei Naval Road near the intersection with Farrington Highway, at the entrance to McDonalds in the Pacific Shopping Mall (Photos 5 and 6). The southwest slopes of the proposed landfill would be visible in the background, behind PVT ISWMF but the proposed landfill does not significantly alter the view plane. The Proposed Action would not obstruct the view of Puu Heleakala or Hina's Cave. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.
- **KOP 3:** Ulehawa Stream Bridge on Farrington Highway, ocean-side, approximately 4,400 feet southwest of the Project Site (Photos 7 and 8). The southwest slopes of the proposed landfill would be visible in the background, behind the Maile Commercial Center, but the proposed landfill does not significantly alter the view plane. The Proposed Action would not obstruct the view of Puu Heleakala or Hina's Cave. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.
- **KOP 4:** Hakimo Road, approximately 4,300 feet west of the Project Site (Photos 9 and 10). The southwest slopes of the proposed landfill would be visible in the background, behind the PVT ISWMF, but the proposed landfill would not significantly alter the view plane or obstruct the view of the Puu Heleakala ridge line. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.
- **KOP 5:** Hakimo Road, approximately 3,100 feet west of the Project Site (Photos 11 and 12). The northwest slopes of the proposed landfill would be visible in the background, behind the PVT ISWMF, but the proposed landfill would not significantly alter the view plane or obstruct the view of the Puu Heleakala ridge line. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.



- **KOP 6:** Paakea Road, approximately 2,100 feet west of the Project Site (Photos 13, 14, and 15). The northwest slopes of the proposed landfill, MRD-2, MRD-3, and the gasification system or anaerobic digestion system equipment would be visible from this KOP. The Proposed Action would be located in the background, behind the existing West Oahu Aggregate white water tower. The Proposed Action would not have a significant impact on the view of the Puu Heleakala landform from Paakea Road. Furthermore, there would be few observers from this KOP because Paakea Road is generally closed to the public and the area is largely agricultural with low population density. The Proposed Action would be visible, but the mitigation included in the Proposed Action would reduce the short- and long-term direct impact to the visual character and quality of the environment to a less than significant adverse impact. There would be no indirect impact.

The visual assessment included views from Hina's Cave to Maui Rock. Photos 16 and 17 show existing conditions and a rendered view of the Proposed Action at a maximum elevation of 255 feet amsl from Hina's Cave towards the Pacific Ocean. As shown, the Proposed Action would have no adverse impact on the panoramic views from Hina's Cave to Maui Rock or other significant landforms.

#### **5.4.3.2 No Action Alternative**

The No Action Alternative would have no short- or long-term, direct or indirect impact to scenic resources. There would be no development on the Project Site and no change in the visual character relative to existing conditions. The PVT ISWMF will be closed and vegetative cover would provide a long-term beneficial visual impact, unrelated to the Proposed Action.

#### **5.4.4 Summary of Impacts and Potential Mitigation**

The Proposed Action will not affect scenic vistas or view planes identified in CCH or State plans or studies of the area, because none were identified that included the Project Site. The Proposed Action would not be visible from parks or other gathering places. The solar panels would be directed away from traffic in the vicinity and there would be no glint or glare impact. The Puu Heleakala landform and views to Hina's Cave would not be affected. There would be no short- or long-term, direct or indirect impact on scenic vistas or view planes.

A visual assessment within the community indicated few viewpoints where the Proposed Action would be visible in the short- or long-term. Of the six KOPs identified where the Proposed Action could be visible, the short- and long-term direct impacts would be less than significant adverse impacts. No additional mitigation measures are proposed to supplement those included in the Project Description.

Under the No Action Alternative there would be no impact to scenic resources.

**Table 5-13 Scenic Resources Impact Summary**

Criterion	Alternatives						
	Proposed Action					No Action	
	Short-term Impacts		Long-term Impacts		Additional Mitigation	Impacts	
	Direct	Indirect	Direct	Indirect		Direct	Indirect
Impact on “scenic vistas and view planes” identified in county or state plans or studies	0	0	0	0	None	0	0
Impact on the visual character and quality of the environment	<	0	<	0	None	0	0

Legend: (0) = no impact; (+) = beneficial impact; (<) = less than significant adverse impact; (-) = significant adverse impact  
Mitigation = none. The mitigation proposed in the project description would reduce adverse impacts and no additional mitigation is warranted.

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## SCENIC RESOURCES PHOTO LOG

### Location of Photos Taken

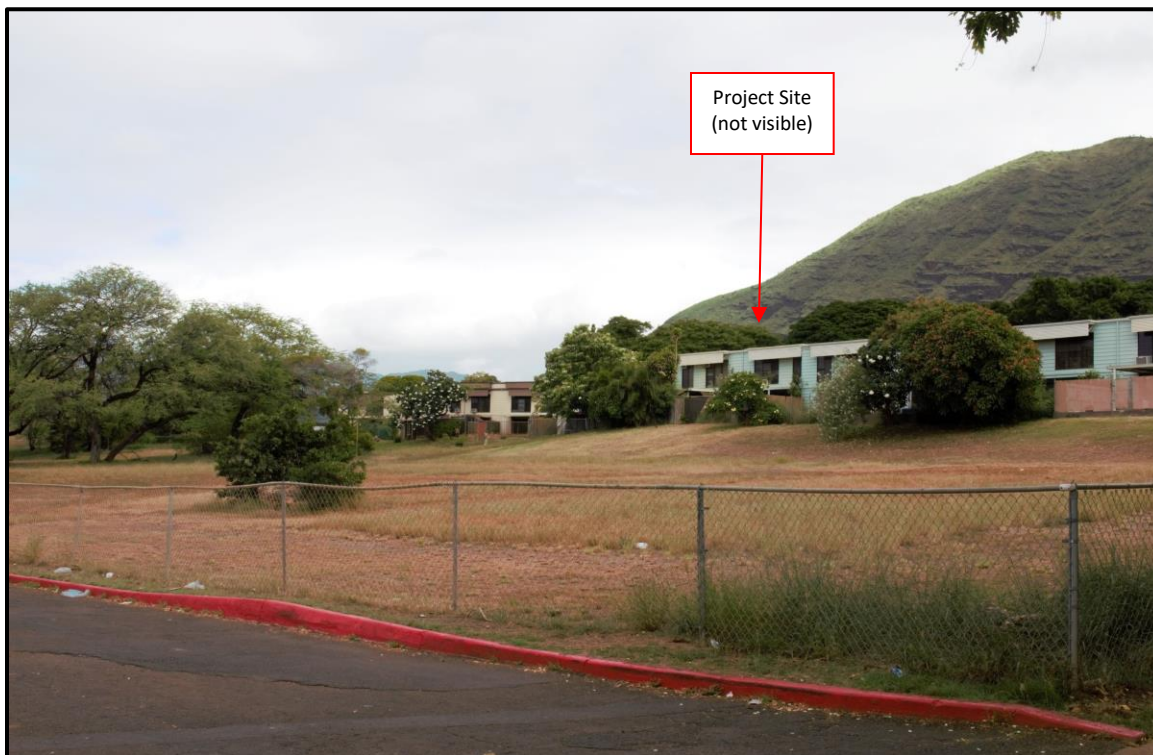




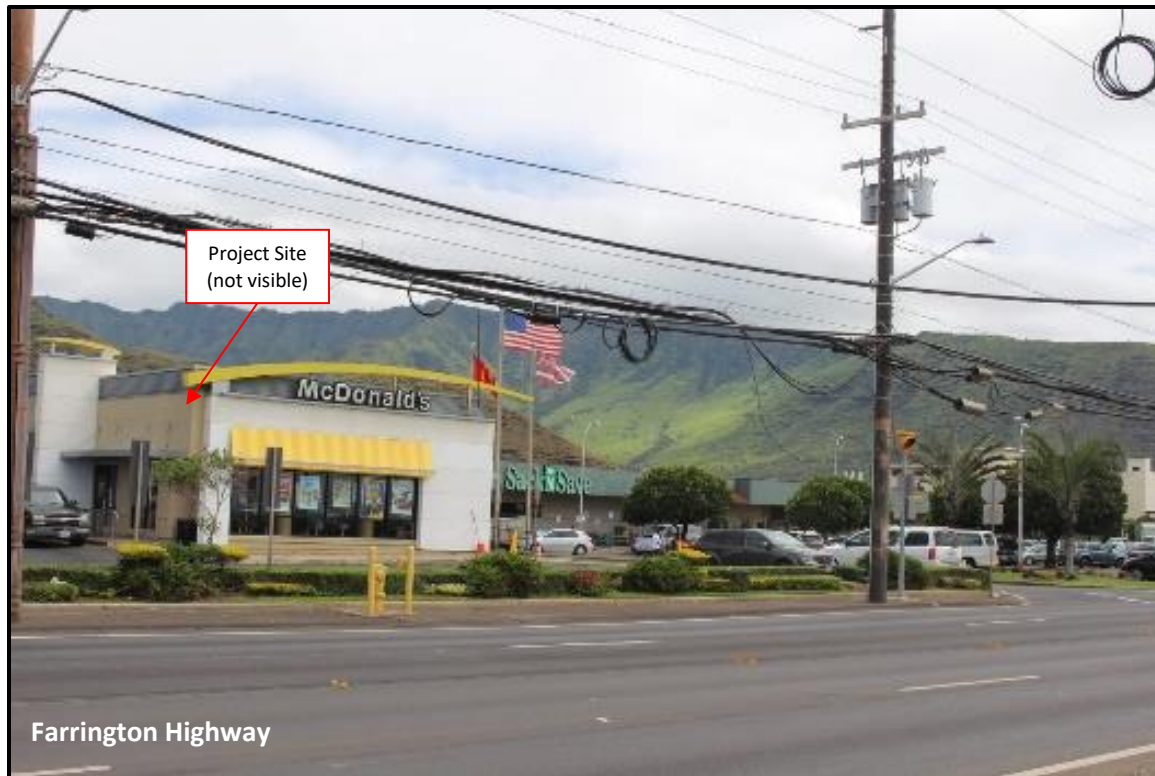
## Obstructed Views Toward the Project Site



**Photo A** – View from northern end of Helelua Street (south of Project Site).



**Photo B** – View from Helelua housing area (south of Project Site).



**Photo C** – View from Farrington Highway / Lualualei Naval Road Intersection (southwest of the Project Site).



**Photo D** – Lualualei Naval Road/Paakea Road Intersection (northwest of the Project Site). View south along Lualualei Naval Road.



## Key Observation Points

### KOP 1



*Photos 1 and 2: KOP 1 – Nanaikeola Street at Farrington Highway.*



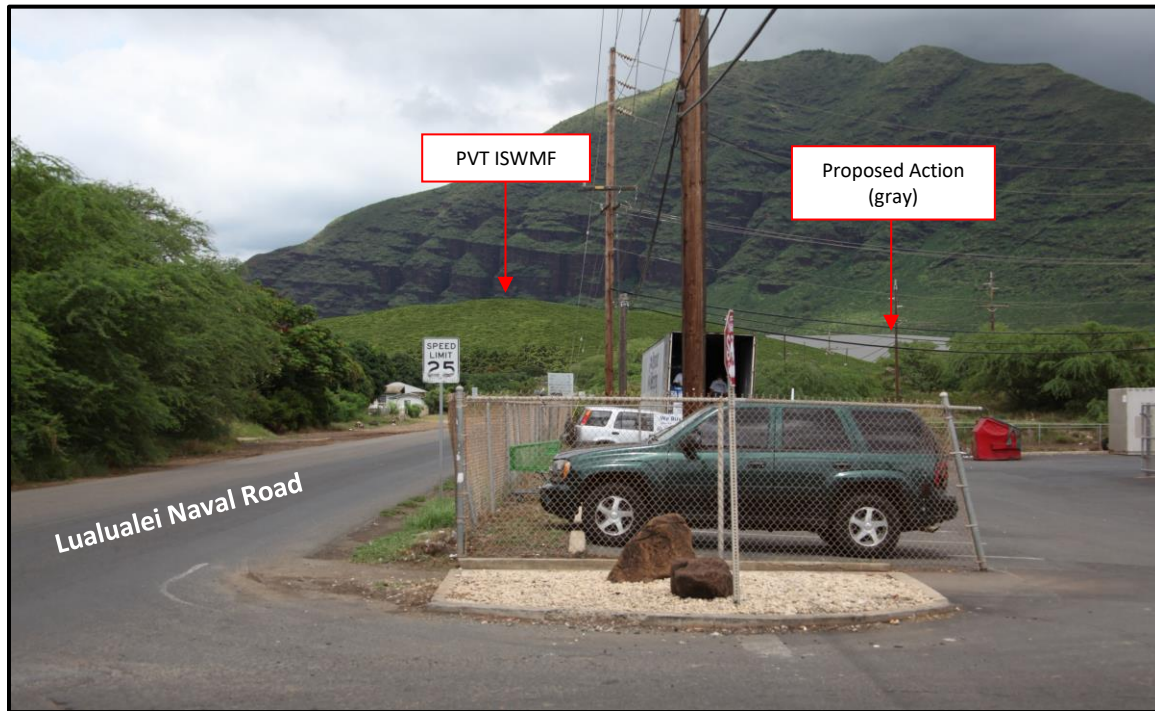




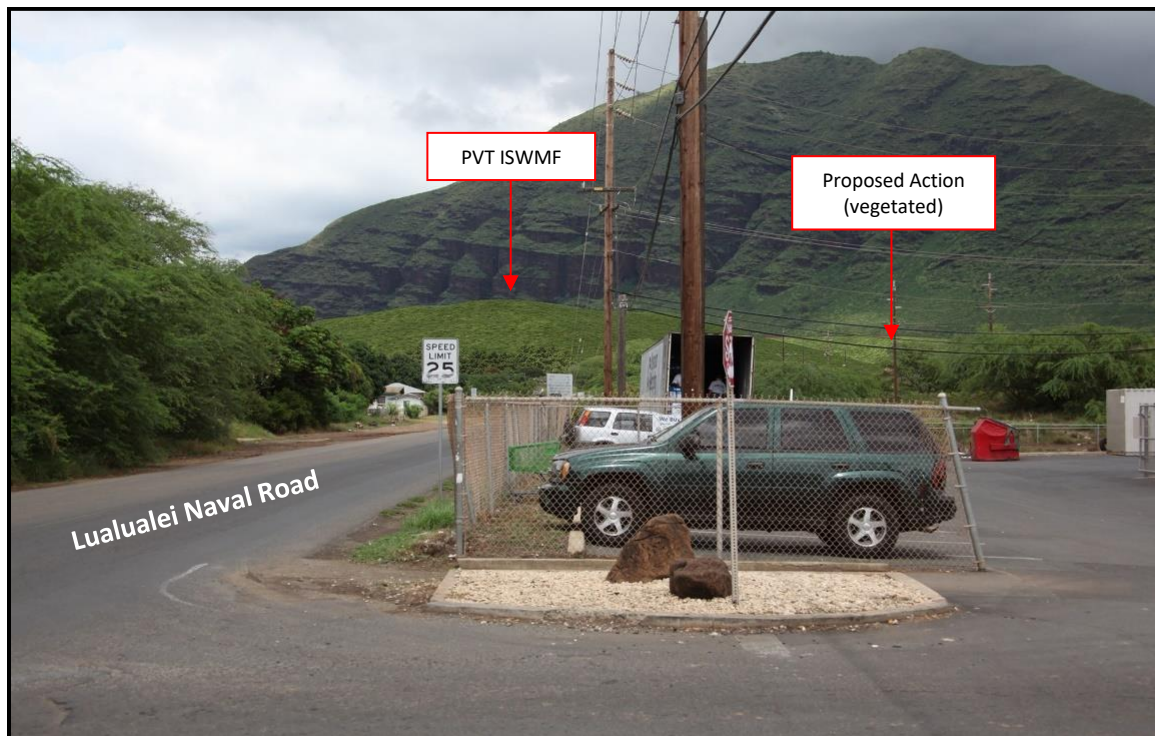
**Photos 3 and 4: KOP 1** – Northern end of Nanaikeola Street adjacent to the Nanaikeola Senior Apartments.



## KOP 2

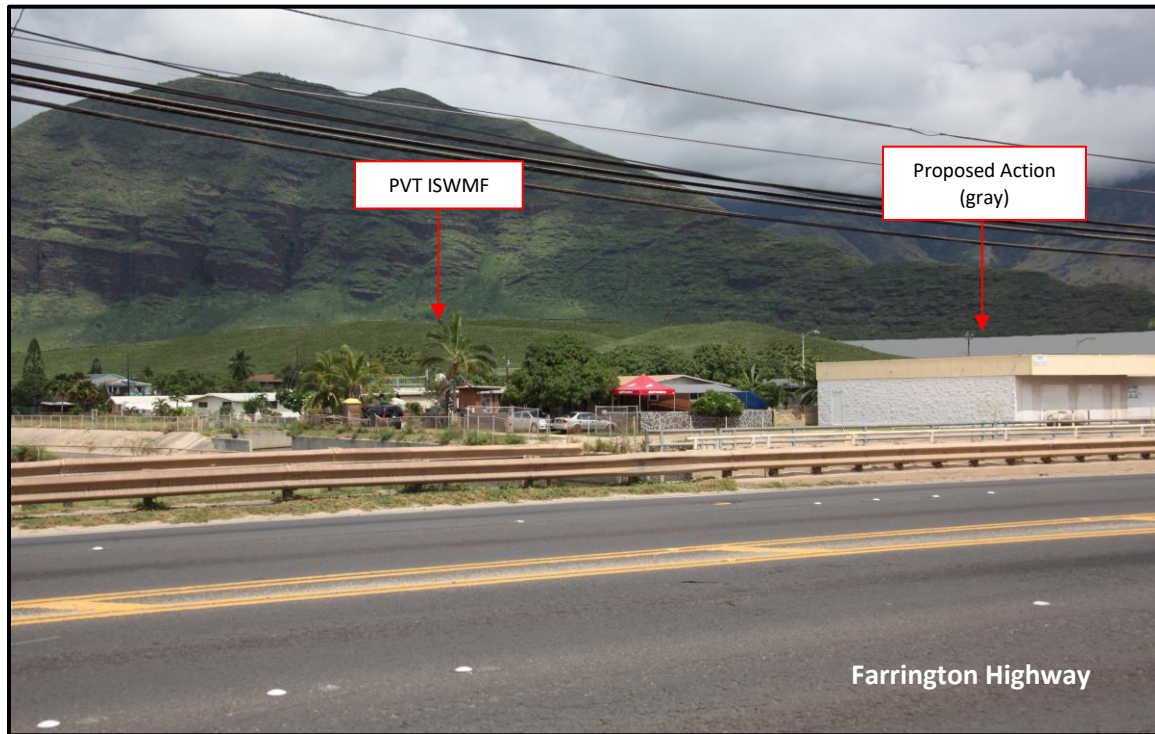


**Photos 5 and 6: KOP 2** – Lualualei Naval Road approximately 1,800 feet south of the Project Site near the entrance to McDonalds in the Pacific Shopping Mall.





### KOP 3

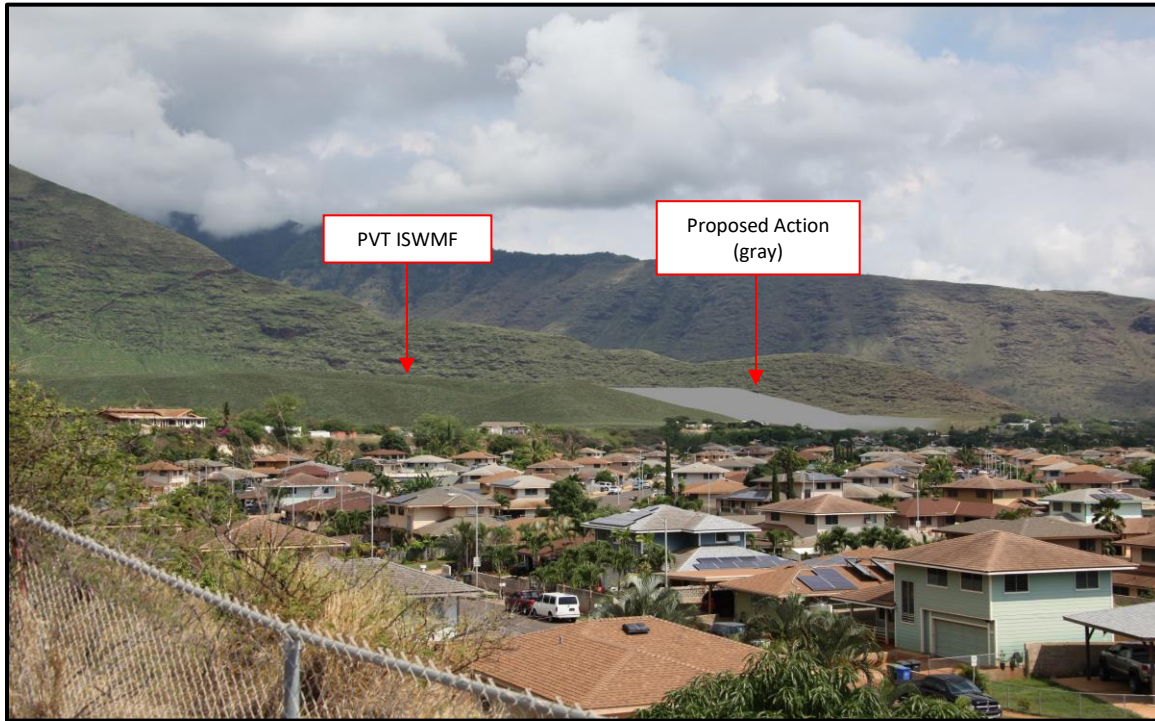


**Photos 7 and 8: KOP 3** – Ulehawa Stream Bridge on Farrington Highway, ocean-side, approximately 4,400 feet southwest of the Project Site.

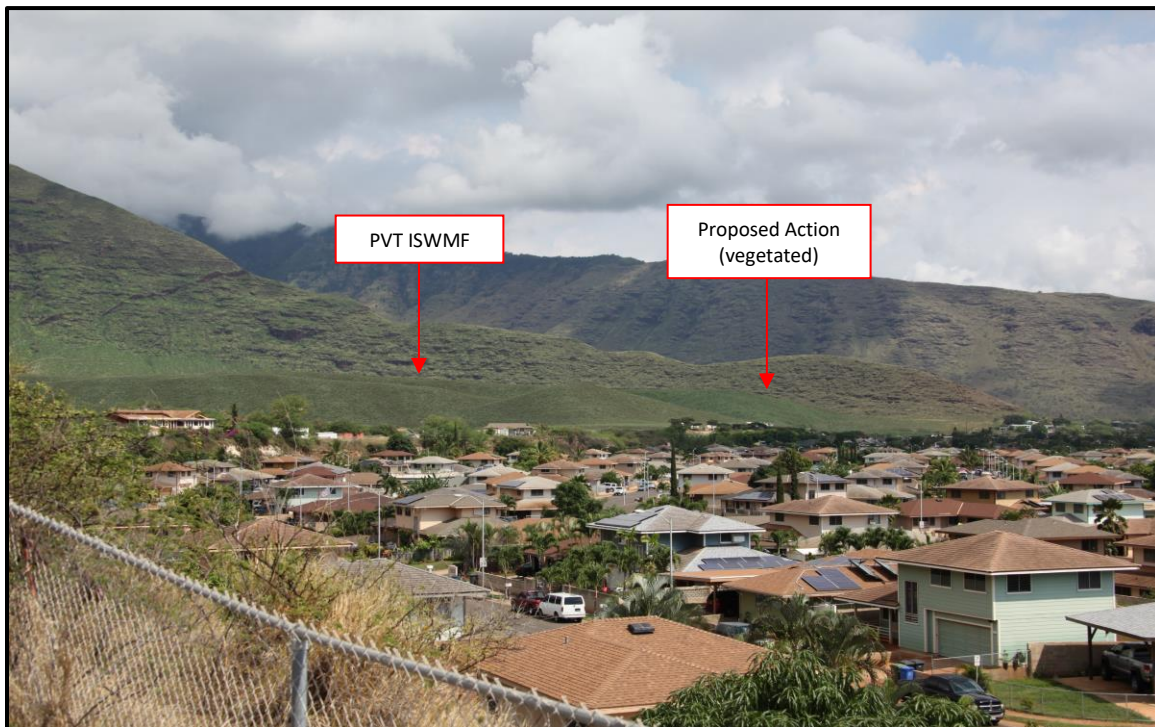




## KOP 4



*Photos 9 and 10: KOP 4 – Hakimo Road, approximately 4,300 feet west of the Project Site.*





## KOP 5

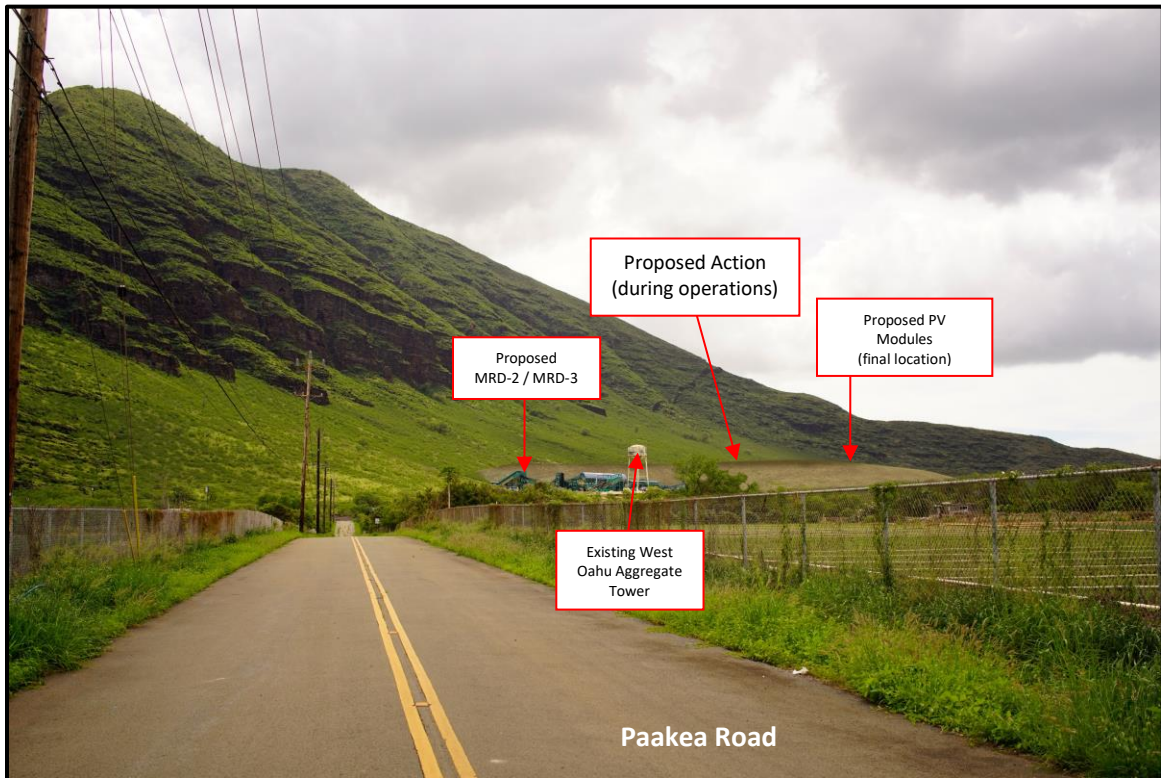


*Photos 11 and 12: KOP 5 – Hakimo Road, approximately 3,100 feet west of the Project Site.*

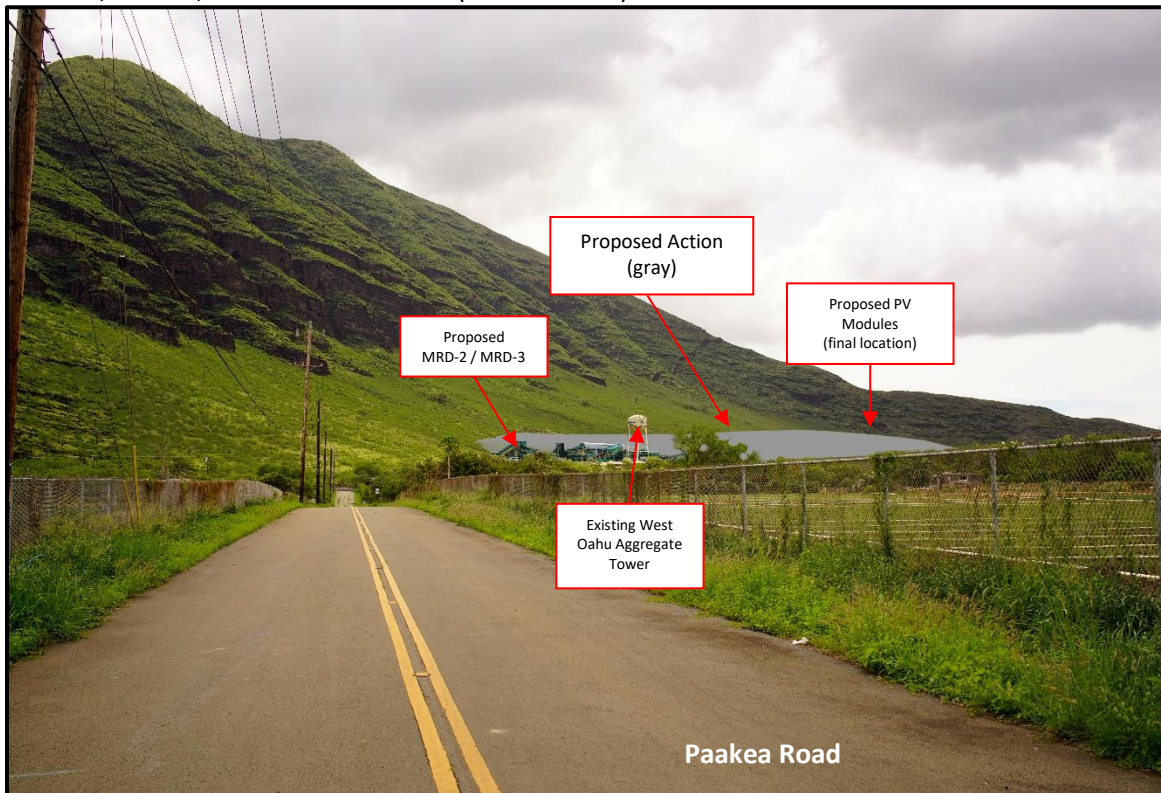




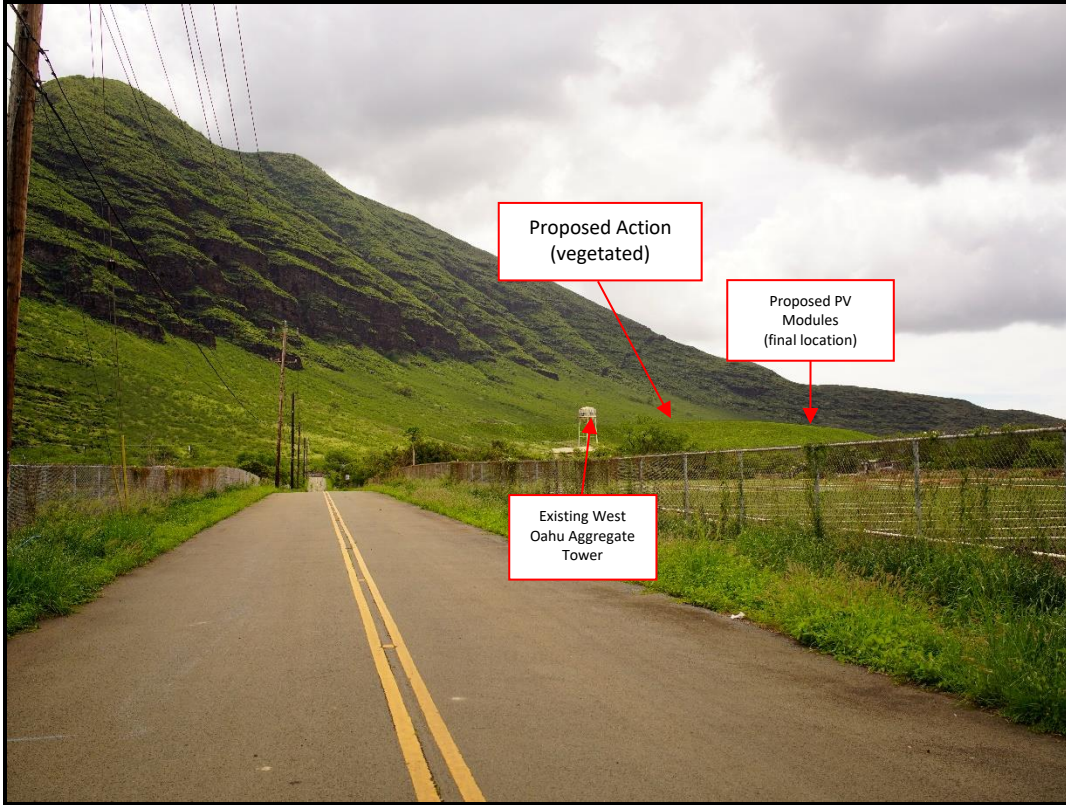
## KOP 6



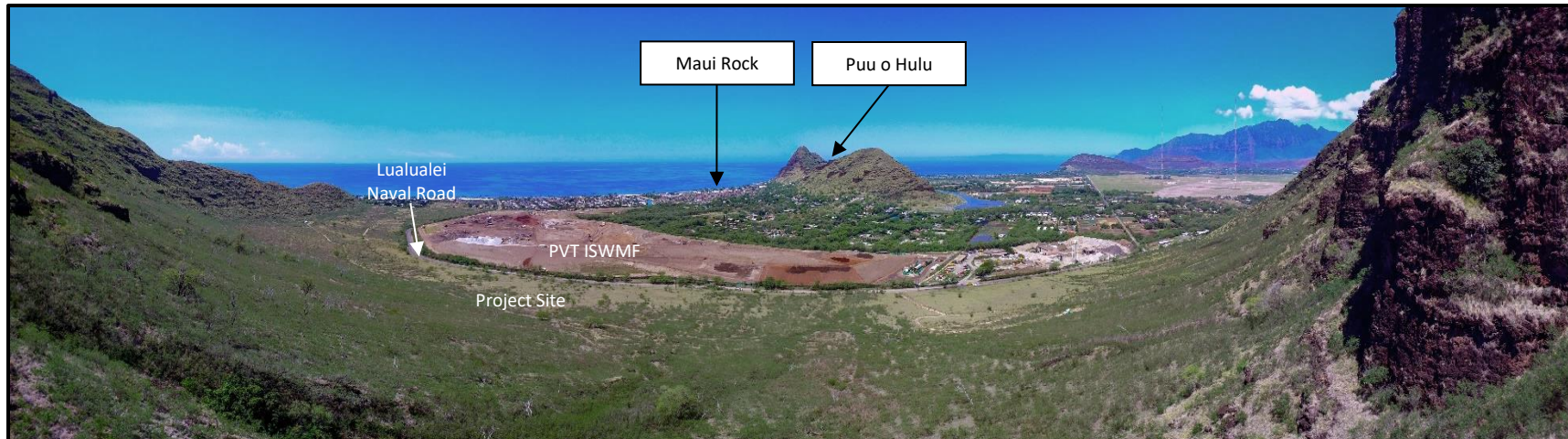
**Photos 13 and 14: KOP 6** – Paakea Road, approximately 2,100 feet west of the Project Site. MRD-2, MRD-3, and the PV modules (final location) would be visible.



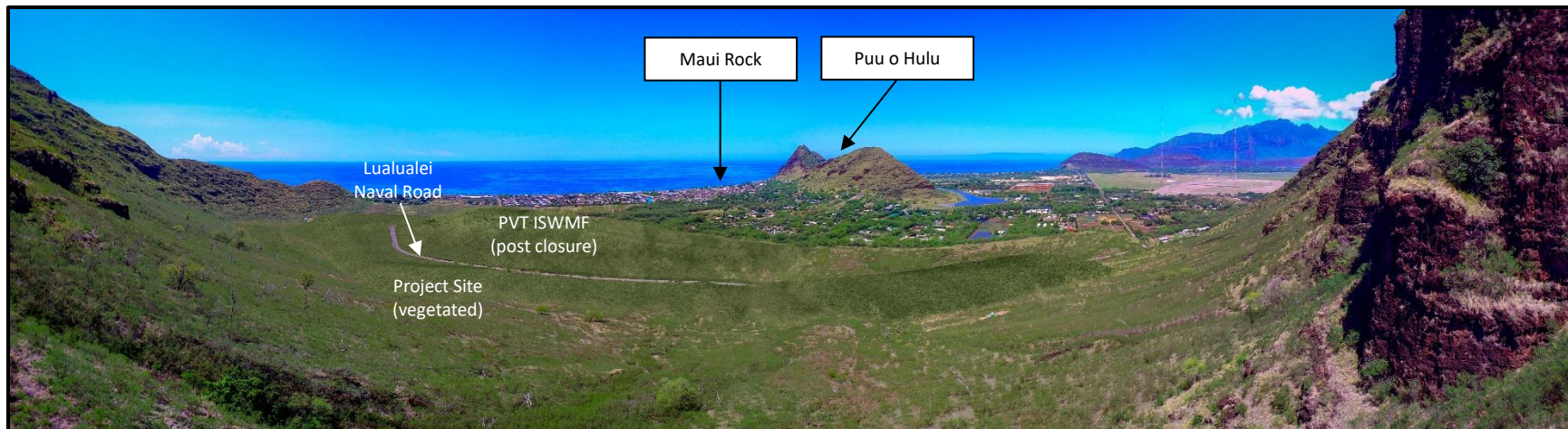




**Photo 15: KOP 6** – Paakea Road, approximately 2,100 feet west of the Project Site. The PV modules (final location) would be visible.

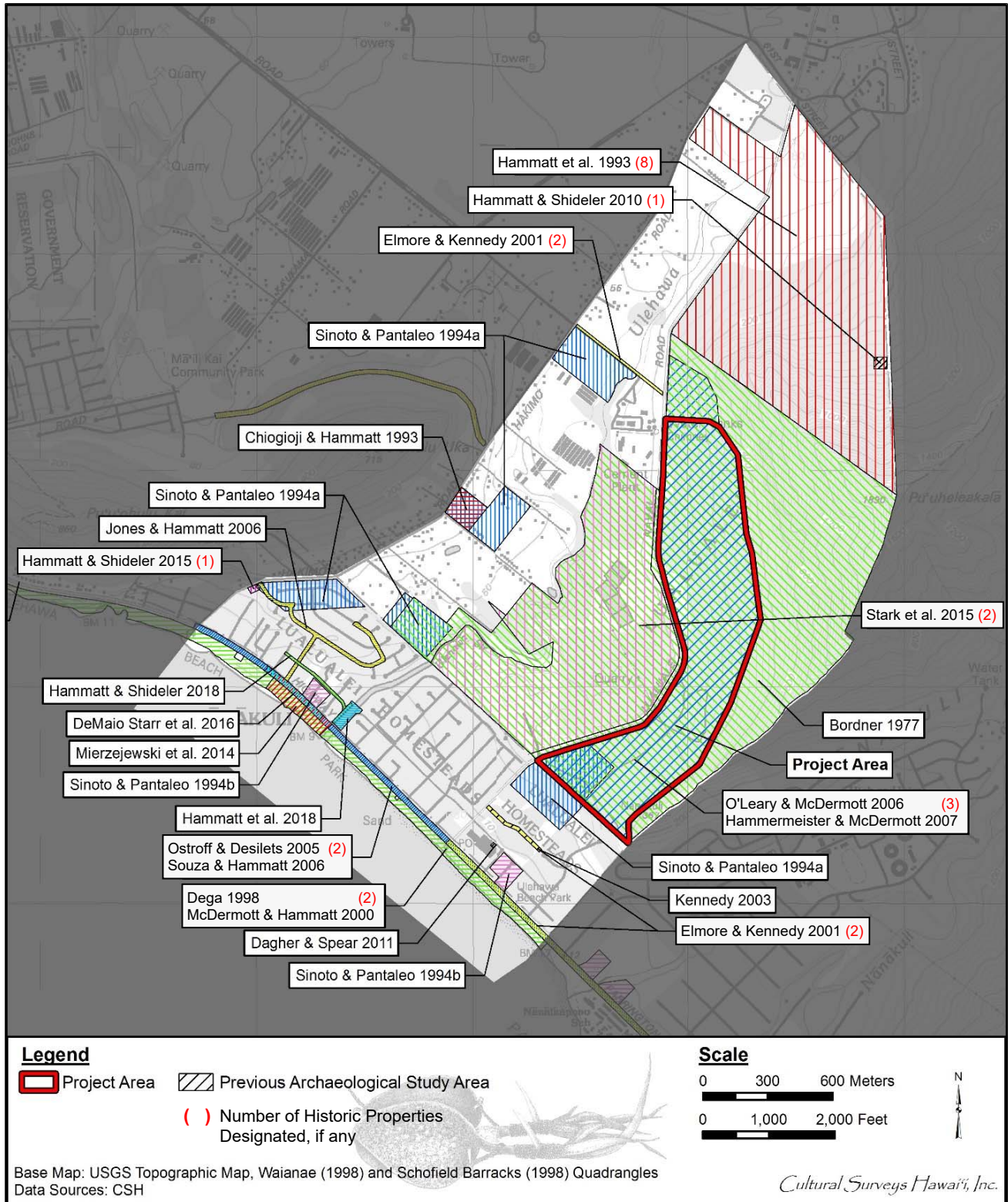


**Photos 16 (Existing) and 17 (Rendered) View from Hina's Cave to Maui Rock** – Panoramic view looking west across the Project Site and PVT ISWMF to Puu o Hulu and the Pacific Ocean. Photo 16 below includes the renderings of the Proposed Action and PVT ISWMF at final elevation with vegetative cover.



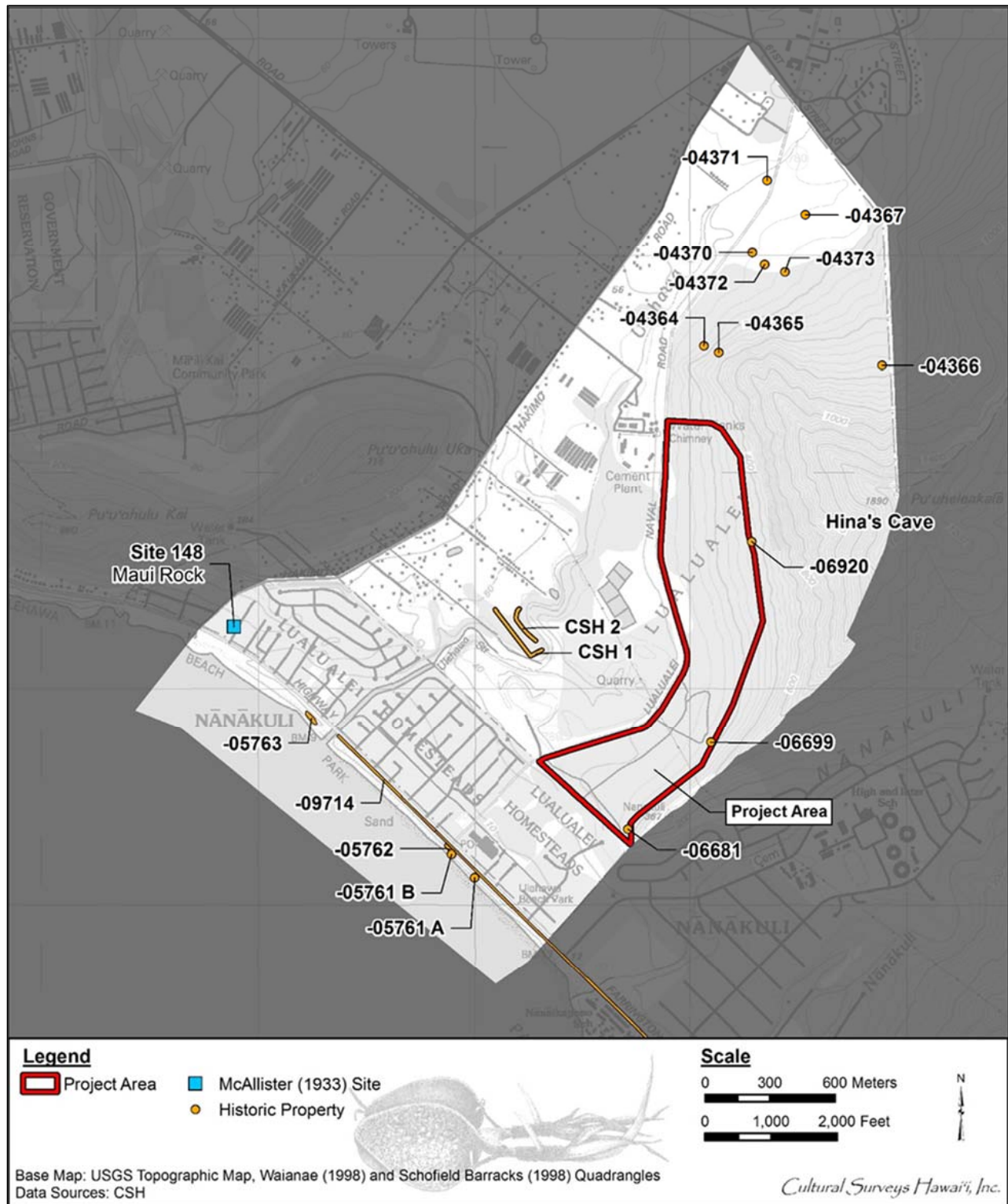
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**Previous Archaeological Study Areas**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**5-1**

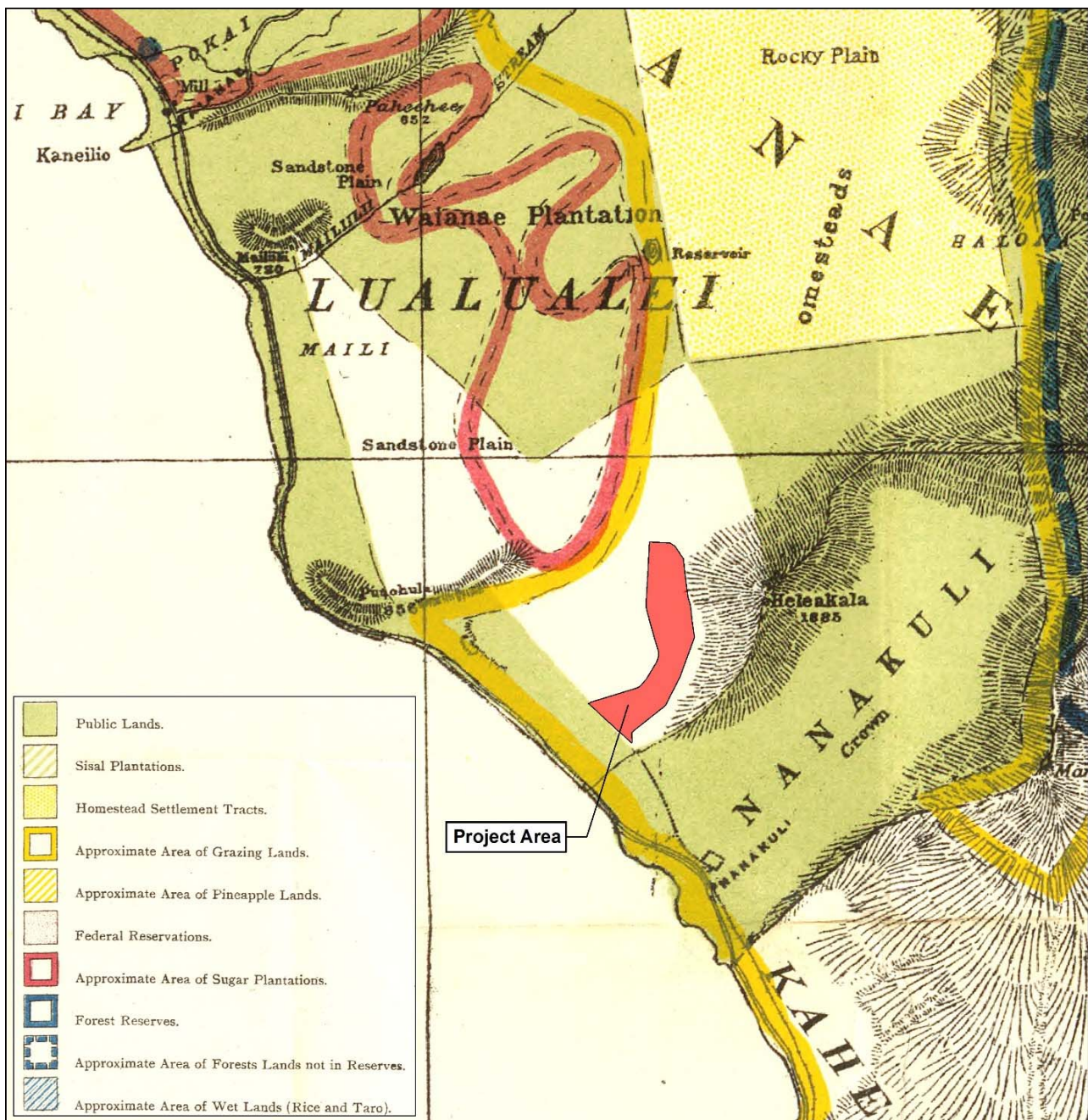


## Previously Identified Historic Properties

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**5-2**





Base Map: 1906 Donn Hawaii Territory Survey Map of Oahu with Land Use (RM 2374)  
Data Sources: CSH

*Cultural Surveys Hawai'i, Inc.*

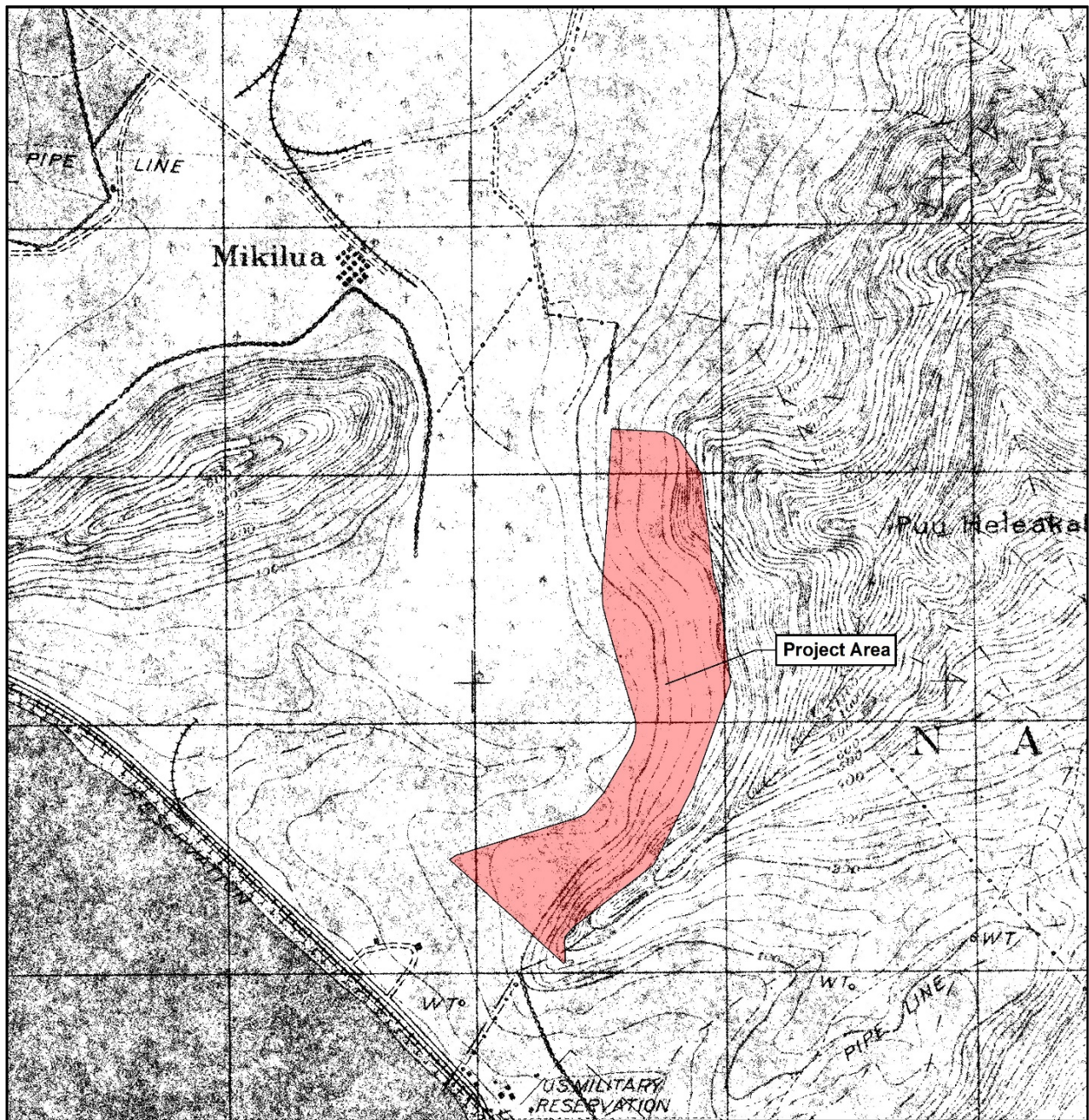
**1906 Donn Hawaii Territory Survey**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**5-3**



Figure  
**5-4**





#### Legend

Project Area

#### Scale

0 300 600 Meters

0 1,000 2,000 Feet

N

Base Map: US Army War Department Fire Control Map, Nanakuli (1919) Quadrangle  
Data Sources: CSH

*Cultural Surveys Hawai'i, Inc.*

## 1919 U.S. Army War Department Map

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure

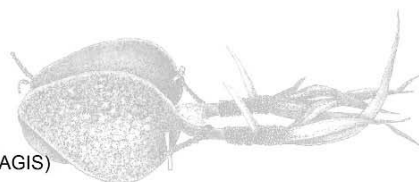
**5-5**





#### Legend

Project Area



#### Scale

0 150 300 Meters

0 500 1,000 Feet



Base Map: 1965 USDA Aerial Photograph (UH MAGIS)  
Data Sources: CSH

*Cultural Surveys Hawai'i, Inc.*

**1965 Aerial Photograph**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**5-6**





#### Legend

Project Area

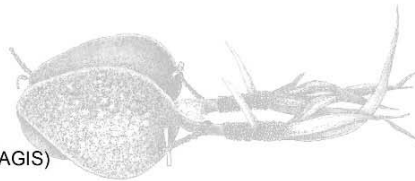
#### Scale

0 150 300 Meters

0 500 1,000 Feet



Base Map: 1993 NOAA Aerial Photograph (UH MAGIS)  
Data Sources: CSH

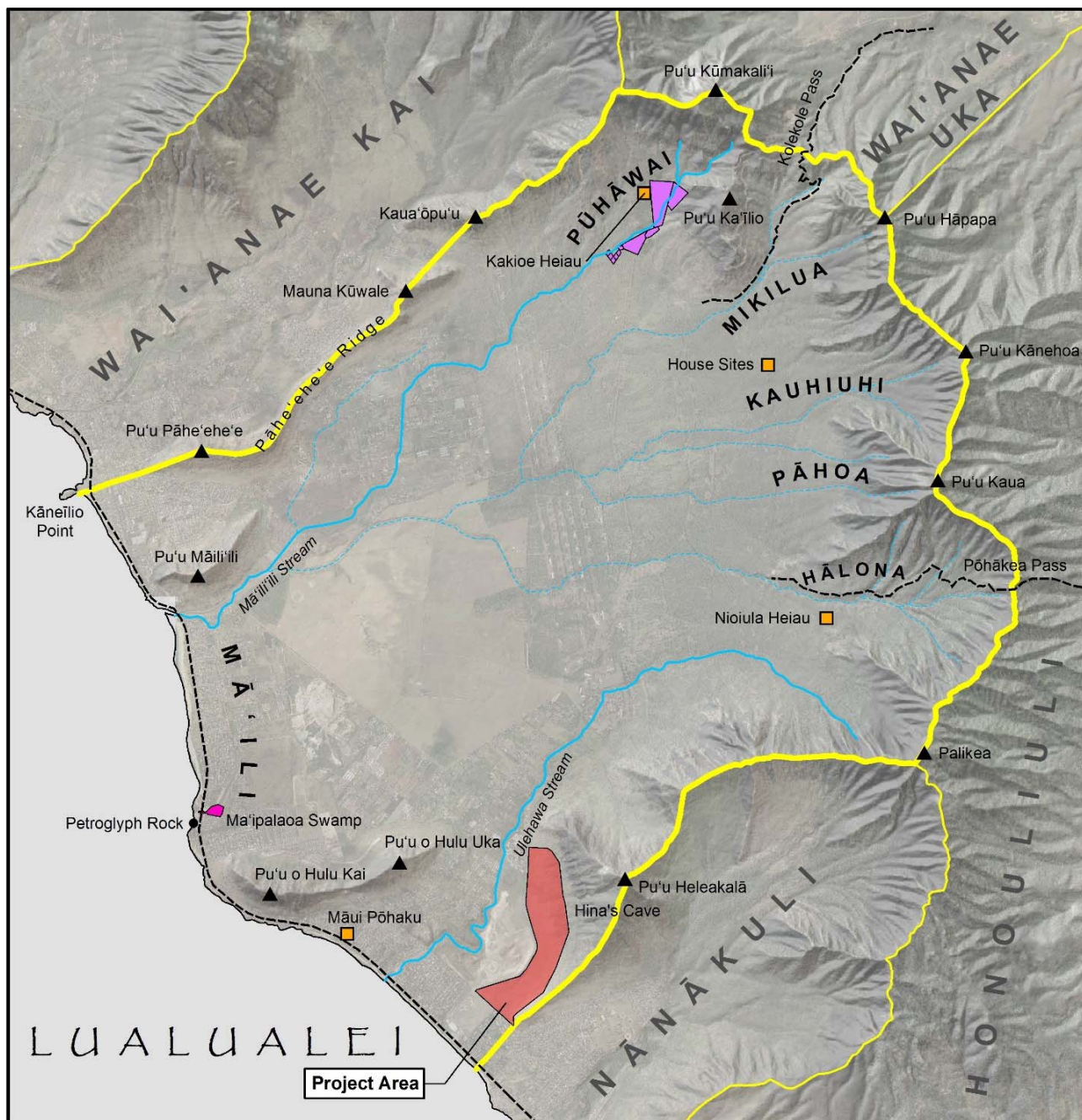


*Cultural Surveys Hawai'i, Inc.*

**1993 Aerial Photograph**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**5-7**





#### Legend

Project Area

Place

Peak

McAllister (1933) Site

Land Commission Award

Salt Pond

Ahupua'a Boundary

Lualualei Ahupua'a

Trail

Stream/Gulch (primary)

Stream/Gulch (tributary)

#### Scale

0 0.5 1 Kilometers

0 0.5 1 Miles

N

Base Map: USGS Orthoimagery Aerial Photographs (2005)  
Data Sources: CSH

*Cultural Surveys Hawai'i, Inc.*

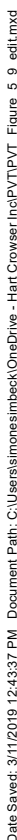
### Lualualei Notable Places and Place Names

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure

**5-8**







## Nānākuli Hawaiian Home Lands



### DHHL PARCELS

- A Princess Kahanu Estates**
    - 270 single-family residences on 53 acres; approximate population of 1,173
  - B Nānākuli Hawaiian Homesteads**
    - 1,040 single-family residences on 260 acres; approximate population of 5,100
  - C Nānākuli Upper Valley**
    - 1,126 acres, currently leased and used by Lyman Ranch
    - TMK 8-9-08:03
  - D Future site of Nānākuli Village Center**
    - 13.65 acres owned by DHHL, located east (Honolulu side) of drainage ditch; land located on western side of ditch is owned by DOE, site of the new Nānāikapono Elementary School
    - Backbone infrastructure is currently under construction at Nānākuli Village Center  
TMKs 8-9-02:01 and 8-9-02:76
  - E Former Nānāikapono School Site**
    - TMK 8-9-01: 04
    - 17 acres currently leased to 9 different organizations:
      - Honolulu Community Action Program Inc. (HCAP)
      - Wai'anae Coast Early Childhood Services Inc.
      - Ka Wai'hona O Ka Na'auao Charter School
      - Kamehameha Schools
      - INPEACE
      - His Highest Praise Westside Church
      - The Pacific American Foundation
      - 'Aha Punana Leo Properties Manager
      - Caretaker: Charlie Sakurai
  - F Nānākuli Ranch**
    - 448 acres currently leased and used by the Rapoza family
    - TMK 8-9-07:02
- TOTAL:**
- 1,310 single-family residences
  - 1,916.65 acres
  - Approximate population of 6,273

### DHHL Parcels in the Vicinity of the Project Site

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

## 6 CONFORMANCE WITH LAND USE PLANS, POLICIES, AND CONTROLS

Section 5.3, *Socioeconomic Resources and Land Use Characteristics* focuses on the Proposed Action's consistency with and impact on actual (and planned) land uses adjacent to the Project Site. Section 6 is an assessment of the Proposed Action's consistency and conformance with key State, CCH, and community-specific land use regulations, policies and controls.

### Section Contents

6.1	Land Use Regulation Overview.....	6-6
6.2	State Plans, Policies, and Controls.....	6-7
6.3	County Plans, Policies, and Controls .....	6-71
6.4	Community-Specific Plans, Policies, and Controls.....	6-85

The following revisions were made to Section 6 in the Final EIS in response to the Draft EIS comments.

Section	Page	Revisions
6.2.2.7	6-25	<p><b><u>Section 5.1, Archaeological and Historical Resources and Section 5.2, Cultural Resources describe historic land uses on the Project Site. There was no evidence of historic subsistence gathering of plant and aquatic resources or other agricultural production at the Project Site. In summary:</u></b></p> <ul style="list-style-type: none"> <li><b><u>Historic settlement patterns were heavily influenced by water resources. Land use in Lualualei was greatest near the coastal areas where marine resources were plentiful, and in the mountainous interior where there was sufficient rainfall. The intervening lands, including the Project Site, were dry scrubland and it is unlikely they would have been frequently utilized by Native Hawaiians. Archaeological evidence supports this assumption. Two pre-contract historic properties were identified at the Project Site, a stacked stone mound interpreted as a traditional Hawaiian marker and a basalt rock shelter. Artifacts found within the rock shelter site suggest it was used as a temporary habitation on an infrequent basis. Native Hawaiians likely took refuge from the mid-day heat or sought shelter while traveling between the deep valley and the coastline.</u></b></li> <li><b><u>Journal entries from early European explorers, census data, and Mahele records have aided in the reconstruction of the agricultural landscape during the time of Western Contact. The coastal lowlands of Lualualei and Waianae Moku would have been cultivated with 'uala and niu, while valley areas would have been planted in kalo and wauke. CSH did not</u></b></li> </ul>

		<p><b><u>identify evidence of subsistence farming or gathering within the Project Site.</u></b></p> <ul style="list-style-type: none"> <li><b><u>The Republic of Hawaii opened lands for homesteading in 1895. By the early 1920s, about 40 families had settled on homestead lots in Lualualei (CSH 2018). No homesteads were awarded at the Project Site.</u></b></li> <li><b><u>By the early twentieth century, parcels within Lualualei Valley were used to grow sugar and pineapple and as grazing land. Historic maps from 1906, 1919, 1936, 1943, 1954, 1963, 1965, 1969, 1977, and 1993 show that the Project Site was largely vacant and was not used for the cultivation of crops or ranching (Appendix H).</u></b></li> </ul>
6.2.2.7	6-26	<p>No “Unique” lands were designated at or in the vicinity of the Project Site. “Prime” lands were designated in the northwest corner of the Project Site <b><u>(1.17 acres)</u></b> and “Other” lands were identified in the southwest corner of the Project Site <b><u>(34.68 acres)</u></b> (Table 6-2 and Figure 6-1).</p>
6.3.2.3	6-82	<p>As described in Section 2.5.2, Site Development Plan and shown on Figure 2-3, there would be a 750-foot buffer between the material disposal and processing facilities and the southern boundary of the Project Site. This buffer is consistent with the current PVT ISWMF and SWMP. Potential impacts would be adequately mitigated based on winds, terrain, technology, and years of responsible waste management experience at the PVT ISWMF. Potential impacts associated with noise, odor, litter, and fugitive dust are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures have been proven to be effective at the PVT ISWMF.</p> <p>PVT has commissioned nine air quality and human health risk assessments for the PVT ISWMF over the last 15 years. There is no evidence that the dust generated by PVT poses a health risk, (Section 3.5 Air Quality).</p> <p><b><u>As described in Section 2.5.2, Site Development Plan and shown on Figure 2-3, there would be a 750-foot buffer between the material disposal and processing facilities and the southern boundary of the Project Site. This buffer complies with Sec. 21-5.680 Added by Ord. 99-12 because:</u></b></p> <ul style="list-style-type: none"> <li><b><u>Potential impacts would be adequately mitigated based on winds, terrain, technology, and operational best management practices.</u></b></li> </ul>

	<p>■ <u>Support structures and operations (such as the entrance and scalehouse) are allowed within the setback area as they do not constitute a “waste disposal and processing facility.”</u></p> <p><u>Potential impacts will be adequately mitigated:</u></p> <p><u>Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures have been proven to be effective at the PVT ISWMF.</u></p> <p><u>Section 3.5, Air Quality, PVT has commissioned nine air quality and human health risk assessments for the PVT ISWMF over the last 15 years. Two of these reports are described in further detail below. In sum, the reports conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that there is no evidence that the dust generated by PVT poses a health risk. PVT would continue to implement dust control measures at the Project Site to minimize the generation and dispersal of fugitive dust as described in Section 2.5.7.2, Dust Control. Odor is not an issue with the Proposed Action due to the inert nature of C&amp;D debris. No impacts to air quality are anticipated.</u></p> <p><u>When PVT first proposed mining of the Phase I landfill cells at its current ISWMF, HDOH was concerned that mining in the cells closest to the residences could adversely affect air quality. Phase I is the area of the current ISWMF that begins at 750 feet from the PVT boundary. DOH required PVT to conduct an air monitoring study at the PVT fenceline using EPA methods both before mining (to establish a baseline) and during mining (to determine if there was any adverse impact). The air monitoring study concluded that the air quality at the PVT fenceline was the same as regional air quality elsewhere on Oahu (and attaining EPA and state standards) both before and during the mining in Phase I.</u></p> <p><u>Fugitive dust impacts of future landfill operations at the Project Site were evaluated by Jim Morrow in a 2019 Air Quality Impact Report completed for the PVT Integrated Solid Waste Management Facility Relocation Project (Appendix B). Morrow used the U.S. EPA-recommended computer model, AERMOD, to evaluate emissions from landfill operations at changing elevation and assumed a 750-foot buffer zone. The results of the modeling analysis are summarized in (Table 3-19) and indicate compliance with federal and state ambient air quality standards. Morrow concluded “PVT’s proposed relocation of operations will not have a significant impact on existing air quality.”</u></p> <p><u>With respect to noise, the Environmental Noise Assessment Report (Appendix D) was prepared by D.L. Adams for the Proposed Action. The study considers all</u></p>
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	<p><u>sources of noise, including traffic, based on the design of the Proposed Action, which includes the 750- foot buffer area. The sound propagation models were created with a conservative approach that assumed worst case scenarios, in which all sources of noise operating simultaneously and continuously through the operational time period. The noise study concludes that noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or “just barely perceptible”).</u></p> <p><u>Section 4.1, Transportation discusses potential impacts of the Proposed Action on traffic. The Proposed Action would not increase traffic to the Project Site, which is limited by their SWMP at 300 haul trucks per day. An independent consultant prepared a Traffic Impact Analysis Report (Appendix F) for the Proposed Action. The report concludes that the Proposed Action is expected to increase the traffic at the intersection of Farrington Highway and Lualualei Naval Road by about 1.0% and 0.8%, during the AM and PM peak hours of traffic, respectively. According to professional traffic engineering standards, this is a less than significant adverse impact on roadway traffic.</u></p> <p><u>Section 4.2, Solid Waste and Litter addresses potential impacts of the Proposed Action on wind-blown litter. Unlike MSW, the PVT ISWMF waste is heavy and unlikely to be a litter nuisance. PVT implements a litter control program that includes inspections, a litter control fence, and daily cover, as described in Section 2.5.7.1, Litter Control. Additional procedures are implemented in the event of a pending wind storm. No impacts related to litter are anticipated.</u></p> <p><u>Although the mitigation would satisfy the minimum setback of 500 feet (Sec. 21-5.680 Added by Ord. 99-12), the Proposed Action was designed to comply with the setback provisions of the PVT SWMP, which states that C&amp;D disposal shall not occur within a buffer area of 750 ft. from the makai property line.</u></p> <p><u>Allowable operations within the setback:</u></p> <p><u>The land use ordinance does not define waste disposal and processing facility or the operations that are allowed within the setback zone. Therefore, we rely on HDOH’s definitions of disposal and processing.</u></p> <p><u>The Proposed Action has only support structures (such as the entrance and scalehouse) within the first 750 feet. There are no waste disposal or processing activities within the Proposed Action’s buffer area. Under the solid waste rules, “disposal” is defined as “the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste onto any land or water so that the solid waste, or any</u></p>
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		<p><u>constituent thereof, may enter the environment, be emitted into the air, or discharged into any water, including ground waters” (HAR § 11-58.1-03). Such activities take place in the landfill cells. Further, “processing” is defined as “an operation to convert solid waste into a useful product or to prepare it for disposal” (HAR § 11-58.1-03). Such activities do not take place in the entrance and scalehouse area of the facility.</u></p> <p><u>Similar setbacks are required for biofuel processing facilities (Sec. 21-5.80A).</u></p> <p><u>“No biofuel processing facility shall be located within 1,500 feet of any zoning lot in a country, residential, apartment, apartment mixed use, or resort district. When it can be determined that potential impacts will be adequately mitigated due to prevailing winds, terrain, technology or similar considerations, this distance may be reduced, provided that at no time shall the distance be less than 500 feet. (Added by Ord. 10-19).”</u></p> <p><u>The biofuel facilities would be located in the northern area of the Project Site beyond the 1,500-foot buffer distance (Figure 2-3).</u></p>
Figure 6-1	---	Correctly identified the area formerly owned by Tropic Land, LLC as owned by MA’O Organic Farms.
Figure 6-2	---	Correctly identified the area formerly owned by Tropic Land, LLC as owned by MA’O Organic Farms.

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## 6.1 Land Use Regulation Overview

This section summarizes the two key land use designations for the Project Site and adjacent parcels. Subsequent sections provide in-depth discussions of the land use policies and regulations.

Each land parcel has a State and CCH designated land use type that is intended to guide the future use of land in accordance with long-range master planning goals and objectives.

The terminology and number of land use designations varies between the State and CCH; with CCH having a more complex system to guide zoning. However, the classification systems can be aligned based on general CCH classes, as shown in Table 6-1.

**Table 6-1 Land Use Designation Terminology**

State	CCH (Simplified)
Conservation	Preservation
Agriculture	Agriculture
Rural	Country, Residential (low density)
Urban	Industrial, Business, Commercial, Residential (higher densities)

Source: HRS § 205-1, ROH Section 21.

The Project Site is designated for Agricultural use under both State and CCH regulations (Table 6-2, Figure 6-1 and Figure 6-2).

East and north of the Project Site is the Puu Heleakala parcel. The Puu Heleakala parcel is designated for Conservation/Preservation land uses by the State and CCH systems, except there is a small vacant portion on the northwest boundary adjacent to Lualualei Naval Road which is designated for Agricultural use by the State and CCH.

West of the Project Site and Lualualei Naval Road is the PVT ISWMF and the West Oahu Aggregate parcel, both of which are designated for Urban use by the State. The CCH designation of the West Oahu Aggregate parcel is Industrial. The CCH designation of the PVT ISWMF parcel is Agriculture.

South of the Project Site are the Puu Heleakala Community and Nanaikeola Village Condominium parcels, designated for Urban use in the State system and Residential in the CCH system. The proposed Green Homes Lualualei II residential development and existing residences on the parcel are designated for Country uses by the CCH and Urban by the State.

In summary, the Project Site is designated for Agricultural use in both the State and CCH systems. However, the Project Site is surrounded by multiple land use designations that range in development density from Conservation/Preservation to Urban/Industrial.

**Table 6-2 Land Use Regulation Overview**

	Project Site	East/North	West	South
<b>State Land Use Regulation (Section 6.2)</b>	Agricultural	Majority: Conservation Northwest portion: Agricultural	PVT & West Oahu Aggregate: Urban	All areas: Urban
<b>CCH Land Use Ordinance (Section 6.3)</b>	Agriculture (AG-2 General)	Majority: Preservation (P-1 Restricted) Northwest portion: Agriculture (AG-2 General)	PVT: Agriculture (AG-2 General) West Oahu Aggregate: Industrial (I-2 Intensive)	Residential (R-5) Parcel adjacent to Lualualei Naval Road: Country

Source: DPP 1974, CCH 2019.

## 6.2 State Plans, Policies, and Controls

This section discusses conformance of the Proposed Action with State Land Use regulations.

The State Land Use Law, HRS Ch. 205, was originally adopted in 1961 to provide a framework for statewide land use management and regulation. The law also establishes the authority of the Land Use Commission (LUC) to administer the State Land Use Law. The LUC responsibilities include establishing land use district boundaries, deciding on petitions for district boundary amendments, and issuing Special Use Permits (SUP) for agricultural districts.

All lands in the State are classified by the LUC into four major districts (HRS Ch. 205):

- Urban
- Rural
- Agricultural
- Conservation

### 6.2.1 Permissible Uses in State Agricultural Districts

In the establishment of agricultural districts, the greatest protection is given to those lands with a high capacity for intensive cultivation. Permissible uses in State agricultural districts are summarized as follows (HRS § 205-2):

1. Activities or uses as characterized by the cultivation of crops, crops for bioenergy, orchards, forage, and forestry;
2. Farming activities or uses related to animal husbandry and game and fish propagation;

3. Aquaculture, which means the production of aquatic plant and animal life within ponds and other bodies of water;
4. Wind-generated energy production for public, private, and commercial use;
5. Biofuel production for public, private, and commercial use;
6. Solar energy facilities, subject to specific conditions;
7. Bona fide agricultural services and uses that support the agricultural activities of the owner of the property and accessory to any of the above activities, regardless of whether conducted on the same premises as the agricultural activities to which they are accessory, including farm dwellings, employee housing, farm buildings, mills, storage facilities, processing facilities, photovoltaic, biogas, and other small-scale renewable energy systems producing energy solely for use in the agricultural activities of the fee or leasehold owner of the property, agricultural-energy facilities, vehicle and equipment storage areas, and plantation community subdivisions;
8. Wind machines and wind farms;
9. Small-scale meteorological, air quality, noise, and other scientific and environmental data collection and monitoring facilities occupying less than one-half acre of land; provided that these facilities shall not be used as or equipped for use as living quarters or dwellings;
10. Agricultural parks;
11. Agricultural tourism conducted on a working farm, or a farming operation for the enjoyment, education, or involvement of visitors;
12. Open area recreational facilities;
13. Geothermal resources exploration and geothermal resources development;
14. Agricultural-based commercial operations registered in Hawaii; and
15. Hydroelectric facilities.

The Proposed Action, specifically a C&D debris management operation, is not identified as a permissible use in the State Agricultural District. However, certain “unusual and reasonable” uses may be permitted under a SUP (HRS § 205-6).

### **6.2.2 Special Use Permit: Unusual and Reasonable Criteria**

PVT intends to petition the CCH Planning Commission and State LUC for a SUP. The test for determining whether a proposed use in the Agricultural District is an “unusual and reasonable use” of the State Agricultural District is based on meeting the following criteria (LUC Rules [HAR § 15-15-95(b)], Special Permit [HRS § 205-6]) that are discussed in subsequent sections as noted:

1. The use shall not be contrary to the objectives of HRS Ch. 205 (Hawaii Land Use Law) (Section 6.2.2.1).



2. The use shall not be contrary to the objectives of HRS Ch. 205A (Coastal Zone Management [CZM]) (Section 6.2.2.2).
3. The use would not adversely affect the surrounding community (Section 6.2.2.3).
4. The use would not unreasonably burden public agencies to provide roads and streets, schools, water drainage and school improvements; and police and fire protection (Section 6.2.2.4).
5. Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established (Section 6.2.2.5).
6. The Project Site is unsuited for the uses permitted within the district (Section 6.2.2.6 and 6.2.2.7).

The Proposed Action meets all of these criteria. Additional detail will be provided in the SUP application.

**6.2.2.1 Criterion 1. The Proposed Action Is Not Contrary To The Objectives Of The State Land Use Law (HRS Ch. 205 And HAR § 15-15)**

The following sections of the State Land Use Law are not applicable because the Project Site is in the State Agriculture District and neither reclassification or a boundary amendment is proposed:

- Land Use Commission Decision Making Criteria (HRS § 205-17).
- Standards for Determining “U” Urban District Boundaries (HRS § 205-18).
- Standards for Determining “C” Conservation District Boundaries (HRS § 205-19).
- Standards for Determining “R” Rural District Boundaries (HRS § 205-21).
- Boundary Amendment Decision Making Criteria (HRS § 205-22).

The Project Site is within the Agricultural District boundary and the Agricultural District Standards are applicable. The Project Site does not meet all of the standards for the Agricultural District, as shown on Table 6-3. It would not be good candidate site for crops or grazing based on the lack of potable water and rocky soils. The Proposed Action would not be contrary to the State’s objectives for designating agricultural districts.

**Table 6-3 Relevant Objectives of State Land Use Law**

HAR §15-15-19 Standards for Determining “A” Agricultural District Boundaries	Is Project Site Consistent?		
	Yes	No	N/A
(1) It shall include lands with a high capacity for agricultural production;		X	
(2) It may include lands with significant potential for grazing or for other agricultural uses; and		X	
(3) It may include lands surrounded by or contiguous to agricultural lands or which are not suited to agricultural and ancillary activities by reason of topography, soils, and other related characteristics; and	X		
(4) It shall include all lands designated important agricultural lands pursuant to part III of Ch. 205, HRS. (Note: This condition is proposed but not yet adopted).		X	
<b>Discussion:</b> The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The site is not designated IAL and is not contiguous to agriculturally productive land. Refer to Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> . The Project Site does conform with the agricultural designation criterion (3) “It may include lands...which are not suited to agricultural and ancillary activities by reason of topography, soils, and other related characteristics.” The Proposed Action is not an agricultural use or a permissible use on Agricultural land but does meet the criteria for “unusual and reasonable use” of lands that are not suitable for agriculture and meets the criteria for a Special Use Permit.			

**6.2.2.2 Criterion 2. The Proposed Action Is Not Contrary To The Objectives Of The State Coastal Zone Management Program (HRS Ch. 205A and HAR § 15-15)**

**Coastal Zone Management**

Hawaii's CZM Program was enacted in 1977 (HRS Ch. 205A) to comply with the Federal CZM Program that was created through passage of the CZM Act of 1972. The CZM area encompasses the entire State of Hawaii and the area extending seaward from the shoreline to the limit of the State's police power and management authority (the territorial sea). The purpose of HRS Ch. 205A is to “provide for the effective management, beneficial use, protection, and development of the Coastal Zone.”

In enacting Part II of HRS Ch. 205A, the legislature found that:

“special controls on developments within an area along the shoreline are necessary to avoid permanent losses of valuable resources and the foreclosure of management options, and to ensure that adequate access, by dedication or other means, to public owned or used beaches, recreation areas, and natural reserves is provided.”

The legislature also found and declared it is State policy to preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawaii. Pursuant to HRS § 205A-5, all State and County agencies shall enforce the CZM objectives and policies defined in HRS § 205A-2.

### Special Management Area

The Special Management Area (SMA) permitting system was established in 1975 with the enactment of the Shoreline Protection Act, Act 176. The SMA permit regulates permissible land uses that are allowed by land use policies including zoning designations, county general plans, and community development plans. It is a management tool to assure that uses, activities, or operations on land or in or underwater within an SMA are carried out in compliance with the CZM objectives and policies, and SMA guidelines. The counties establish SMA boundaries along the coastlines, subject to State Office of Planning review, and administer the SMA boundaries and shoreline setback provisions.

Although the Project Site is within the CZM area, it is not within the SMA (Figure 6-2); therefore, no SMA permit would be required for the Proposed Action.

As indicated in Table 6-4, the Proposed Action conforms with the applicable CZM Program objectives and policies set forth in HRS § 205A-2.

**Table 6-4 Consistency with CZM Program (HRS Ch. 205A) Objectives**

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Recreational Resources</b>			
<b>(b) Objective:</b> Provide coastal recreational opportunities accessible to the public.			X
<b>(c) Policies:</b>			
<b>(A)</b> Improve coordination and funding of coastal recreational planning and management; and			X
<b>(B)</b> Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			X
<b>(i)</b> Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			X
<b>(ii)</b> 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
<b>(iii)</b> Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			X
<b>(iv)</b> Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			X

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	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
<b>Discussion:</b> The Proposed Action is not a coastal dependent development, is not located on the coastline, and is not in the SMA. Most policies are not applicable to the Proposed Action. However, the Proposed Action will comply with State water quality standards, including the HDOH NPDES permit program. The Proposed Action would have a stormwater management system. The impermeable liner system is designed to protect ground water resources. No impact to coastal waters is anticipated. See Section 3.4, <i>Water Resources</i> .			
Historic Resources			
(b) <b>Objective:</b> Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.	X		
(c) <b>Policies:</b>			
(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		
<b>Discussion:</b> The Proposed Action will protect historic resources, as discussed in Section 5.1, <i>Archaeological and Historical Resources</i> and Appendix G. Three manmade archaeological and historic sites were identified within the Project Site but are outside of the proposed development and operations area. A <i>Preservation Plan</i> was prepared by CSH and approved by SHPD to provide long-term conservation for one of the historic sites. The <i>Preservation Plan</i> will be implemented, and the plan elements are included in the Project Description (Section 2, <i>Proposed Action and Alternatives</i> ). The SHPD correspondence is included in Appendix G. No traditional cultural properties or practices were identified at the Project Site (Section 5.2, <i>Cultural Resources</i> ).			

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Scenic and Open Space Resources</b>			
<b>(b) Objective:</b> Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.	X		
<b>(c) Policies:</b>			
<b>(A)</b> Identify valued scenic resources in the coastal zone management area;	X		
<b>(B)</b> 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		
<b>(C)</b> Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			X
<b>(D)</b> Encourage those developments that are not coastal dependent to locate in inland areas.	X		
<b>Discussion:</b> The Proposed Action would include landscaping, buffers, fencing and berms to minimize adverse impacts to scenic views and open space. As described in Section 5.4, <i>Scenic Resources</i> , the Project Site is not included in documented scenic views to or from the coastline. A visual assessment in the community indicated few viewpoints where the Proposed Action would be visible in the short- or long-term. The Proposed Action would be inland and bounded to the north and east by the Puu Heleakala landform. The intervening topography, built environment, and vegetation obstructs line of sight views to the Project Site from the coastline and gathering places in the community. Of the six KOPs identified where the Proposed Action could be visible, the short- and long-term direct impacts would be less than significant. No additional mitigation measures are proposed to supplement those included in the Project Description (Section 2, <i>Proposed Action and Alternatives</i> ).			
<b>Coastal Ecosystems</b>			
<b>(b) Objective:</b> Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.	X		
<b>(c) Policies:</b>			
<b>(A)</b> Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;	X		
<b>(B)</b> Improve the technical basis for natural resource management;	X		
<b>(C)</b> Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;	X		
<b>(D)</b> 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		
<b>(E)</b> Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and	X		



CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.			
<b>Discussion:</b> The Proposed Action is not a coastal dependent development, is not located on the coastline, and does not contain any coastal ecosystems. There are no surface water bodies on or adjacent to the Project Site. As discussed in Section 3.4, <i>Water Resources</i> , the Proposed Action would not impact marine, surface, or groundwater quality. The Proposed Action would comply with State water quality standards, including the HDOH NPDES permit program. The Proposed Action would have a stormwater management system. The impermeable liner system is designed to protect groundwater resources and PVT's leachate and groundwater monitoring programs would detect potential leaks in the liner system. The proposed operations would rely on non-potable water resources to the extent possible.			
Economic Uses			
<b>(b) Objective:</b> Provide public or private facilities and improvements important to the State's economy in suitable locations.	X		
<b>(c) Policies:</b>			
<b>(A)</b> Concentrate coastal dependent development in appropriate areas;			X
<b>(B)</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		
<b>(C)</b> 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:			X
<b>(i)</b> Use of presently designated locations is not feasible;			X
<b>(ii)</b> Adverse environmental effects are minimized; and			X
<b>(iii)</b> The development is important to the State's economy.			X
<b>Discussion:</b> The Proposed Action is not a coastal dependent development, is not located on the coastline, and does not contain any coastal ecosystems. The Proposed Action includes energy-generating facilities, which are appropriately sited inland of the SMA. As described in Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> , the Proposed Action would continue to provide a critical public service at no cost to government, while providing revenues to the State and CCH and jobs for Waianae Region residents.			
Coastal Hazards			
<b>(b) Objective:</b> Reduce hazard to life and property from tsunamis, storm waves, stream flooding, erosion, subsidence, and pollution.	X		
<b>(c) Policies:</b>			

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
(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		
<p><b>Discussion:</b> The Proposed Action is appropriately sited inland from the coastline and outside of the projected storm wave, tsunami, stream flood/500-year floodplain, and sea level rise hazard zones (Section 3.3, <i>Natural Hazards</i>). The Proposed Action is designed to comply with development standards regarding seismicity, slope stability, erosion control, flooding, and hurricane winds. In the event of natural or man-induced disaster, the PVT ISWMF emergency management plan would be implemented to minimize the threat to life and property. The PVT ISWMF would continue to be designated by the CCH as a location for debris management during disaster recovery. The Proposed Action would not cause or otherwise significantly increase downstream flooding. The stormwater management system would be sized to handle the runoff from the Proposed Action site and upgradient areas of the property. Stormwater would be managed onsite through LID principles.</p>			
<b>Managing Development</b>			
(b) <b>Objective:</b> Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			X
<b>(c) Policies:</b>			
(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 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
<p><b>Discussion:</b> The Proposed Action is not a coastal development, is not located on the coastline, and is not in the SMA; however, as noted in Section 1.2.1, <i>EIS Preparation Notice and Stakeholder Outreach</i>, there has been public outreach during preparation of the EIS. There will be other opportunities for public engagement during the permit review process.</p> <p>PVT will continue to engage the public during operations (Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i>) to raise awareness of their operations and educate the public on technologies used to recover, reuse, and recycle C&amp;D debris. PVT would continue to host a website and a hotline for public</p>			

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
concerns, regularly report to the Nanakuli-Mailii Neighborhood Board, publish the latest news in the local newspaper, and provide tours of their facility.			
<b>Public Participation</b>			
<b>(b) Objective:</b> Stimulate public awareness, education, and participation in coastal management.			X
<b>(c) Policies:</b>			
<b>(A)</b> Promote public involvement in coastal zone management processes;			X
<b>(B)</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
<b>(C)</b> Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.			X
<b>Discussion:</b> The Proposed Action is not a coastal development and is not in the SMA; however, PVT will continue to engage the public during operations (Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> ) to raise awareness of their operations and educate the public on technologies used to recover, reuse, and recycle C&D debris. PVT would continue to host a website and a hotline for public concerns, regularly report to the Nanakuli-Mailii Neighborhood Board, publish the latest news in the local newspaper, and provide tours of their facility.			
<b>Beach Protection</b>			
<b>(b) Objective:</b> Protect beaches for public use and recreation.			X
<b>(c) Policies:</b>			
<b>(A)</b> 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>(B)</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
<b>(C)</b> Minimize the construction of public erosion-protection structures seaward of the shoreline.			X
<b>(D)</b> 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
<b>(E)</b> 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

CZM Program Objectives	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Discussion:</b> The Proposed Action is not a coastal dependent development, is not located on the coastline, and is not in the SMA; therefore, these policies are not applicable.			
<b>Marine Resources</b>			
<b>(b) Objective:</b> Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			X
<b>(c) Policies:</b>			
<b>(A)</b> Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			X
<b>(B)</b> Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			X
<b>(C)</b> 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
<b>(D)</b> 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
<b>(E)</b> Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			X
<b>Discussion:</b> The Proposed Action is not a coastal dependent development, is not located on the coastline, and is not in the SMA; therefore, these policies are not applicable. Section 3.4, <i>Water Resources</i> assesses potential direct and indirect impacts to water quality. The Proposed Action would not impact marine and coastal resources.			

### 6.2.2.3 Criterion 3. The Proposed Action Would Not Adversely Affect the Surrounding Community

As described in Section 5.3, *Socioeconomic Resources and Land Use Characteristics*, the Proposed Action would continue to have beneficial socioeconomic impacts on the surrounding community and the Waianae Region. The Proposed Action would continue the current PVT ISWMF operations in the same community and under the same responsible management. PVT would continue to provide employment and on-the-job skills training; financial and volunteer support for community organizations and activities; and fund a college scholarship program for Waianae Region high school graduates.

PVT would continue to communicate regularly with the community through the PVT website, neighborhood board meetings, and newspaper articles. PVT responds quickly to community inquiries and concerns through the PVT hotline. PVT would continue to encourage community

groups and students to tour the PVT ISWMF to learn about C&D debris management and the technologies employed to divert materials from the landfill and generate renewable energy.

The surrounding community to the north, east and west of the Project Site are characterized by low population densities and are upwind of the Proposed Action. Lands east and north are Conservation or Agricultural (Table 6-2 and Figure 6-1) and are vacant. The land uses west (including the PVT ISWMF) are businesses and would be compatible with the Proposed Action's land use. Lualualei Naval Road is not a public thoroughfare and traffic adjacent to the Project Site is generally limited to military vehicles and haul trucks. No adverse impacts to communities to the north, east, and west were identified.

The potential adverse impacts on the surrounding community would generally be limited to the residents (current and future) of the designated Urban lands located south, southwest and southeast of the Project Site. Based on past PVT ISWMF operational experience, PVT was able to anticipate potential adverse impacts and incorporated proven mitigation measures into the Proposed Action design, construction, and operations phases to avoid or reduce the potential significant adverse impacts to less than significant (Section 2, *Proposed Action and Alternatives*). PVT is committed to implementing the Proposed Action, as described.

Examples of reducing potential significant impacts from the Proposed Action include:

- Implementation of the SHPD-approved *Preservation Plan* at the Project Site to avoid inadvertent impact to a historic property identified onsite.
- The design and installation of a stormwater management system, and compliance with stormwater permit conditions.
- The design and installation of a multilayer-impermeable liner and leachate management system that would avoid potential impacts to groundwater. Note C&D disposal sites are not required to have an engineered liner system.
- Implementation of dust control BMPs to minimize the generation and dispersal of fugitive dust to lessen impacts to air quality.

No significant adverse impacts are anticipated from the Proposed Action with the implementation of mitigation measures, as described in Section 2, *Proposed Action and Alternatives*.

#### **6.2.2.4 Criterion 4. The Proposed Action Would Not Unreasonably Burden Public Agencies To Provide Roads And Streets, Schools, Water Drainage And School Improvements; and Police And Fire Protection**

The Proposed Action is a relocation of the PVT ISWMF operations to a site on the opposite side of Lualualei Naval Road. The Proposed Action would not induce population growth in the region or directly burden public infrastructure and services, as described in Section 4, *Public Infrastructure and Services* and summarized as follows:



- **Transportation:** Traffic continues to be an issue for the Waianae Region. However, as described in Section 4.1, *Transportation*, the Proposed Action would not significantly impact traffic. PVT is permitted by their SWMP to accept up to 300 haul trucks per day and up to 3,000 tons of materials per day. PVT currently employs up to 80 employees. PVT does not propose to increase these limits.

During recovery from a natural disaster, CCH relies on PVT to manage disaster debris. An indirect benefit of this service is the roads to Waianae would be cleared of debris before the rest of Oahu.

- **Solid waste:** The Proposed Action would continue the existing beneficial impacts of PVT's operations on CCH solid waste management and recycling goals, to the people of Oahu, and the construction industry. The Proposed Action would provide uninterrupted C&D waste management services and adequate capacity to meet the CCH's long-range planning forecasts for Oahu's C&D. PVT provides these services at no cost to taxpayers or government agencies. In the event of a natural disaster (e.g., hurricane), PVT is a designated facility able to accept disaster debris through Federal (FEMA) and State funding. The Proposed Action would continue to provide revenue to State and CCH government through general excise tax (GET), property taxes, and the solid waste surcharge. The surcharge is deposited into the State Environmental Management Special Fund and is used to support the HDOH Solid and Hazardous Waste Branch. Without the Proposed Action, the burden to design, construct, and operate a C&D waste management facility would fall on the CCH and State waste management agencies. (Section 4.2, *Solid Waste and Litter* and Section 5.3, *Socioeconomic Resources and Land Use Characteristics*).

The Proposed Action would continue to provide responsible solid waste management that reduces the illegal dumping on Oahu.

- **Water and wastewater:** The Proposed Action would have no impact on public wastewater management services. The use of non-potable water to the extent practical and drought tolerant landscaping at the Project Site would minimize the need for BWS water. The PVT potable water use would not increase with the relocation of operations (Section 4.3, *Water and Wastewater*).
- **Power and communication:** PVT would continue to rely on renewable energy generated onsite to the extent possible. HECO services would be required to supplement PVT's renewable energy sources. HECO has sufficient capacity (Section 4.4, *Power and Communication*).
- **Emergency services or community facilities.** The Proposed Action would not induce population growth or increase health risks in the community that would result in an increased burden to police, fire, medical, and emergency response services. There would be no impact on educational, or recreational facilities and services (Section 4.5, *Emergency Services* and Section 4.6, *Community Facilities*).

#### **6.2.2.5 Criterion 5. There Are Unusual Conditions, Trends, And Needs Since District Boundaries Were Established**

Subsequent to the State land district designation, the Project Site was determined to be not suitable for agricultural use or any other permissible uses of agricultural land (as described in Section 6.2.2.6 and Section 6.2.2.7). This is considered an “unusual condition” associated with the Project Site.

PVT ISWMF operations became a critical part of the State and CCH integrated solid waste management plans, establishing a trend and a need for continued operations, as described in Section 2.2, *Purpose and Need for the Proposed Action*. The CCH Environmental Services Division *Integrated Solid Waste Management Plan* (2019) identifies PVT ISWMF as the only commercial C&D landfill on Oahu and relies on PVT to continue to provide this service into the 20-year forecast planning cycle.

Privatization of waste management has become a trend. PVT provides a critical public service at no cost to government or taxpayers. Revenues in the form of GET and property tax are paid to the government. PVT assumes the land acquisition, design, development, permitting, operating, and landfill closure costs.

Historical Oahu landfill siting studies identified the Project Site and the PVT ISWMF together as one landfill site (Nanakuli) (See Section 6.4.1, *Waianae Sustainable Communities Plan*). The intent of this was to use both sites and relocate landfill operations to the Project Site (formerly known as Nanakuli B) when PVT ISWMF (Nanakuli A) reached capacity. PVT has consistently reminded the public and agencies of this intent whenever alternative uses of the Project Site were proposed.

In addition to C&D debris management, CCH relies on PVT to provide temporary storage for proper recycling or processing for disposal of debris that might result from a hurricane, tsunami, or other natural disaster, according to the CCH’s *Disaster Debris Management Operations Plan* (2001). The Project Site was selected because of its size and its close proximity to both Waimanalo Gulch and the PVT ISWMF. Should such a disaster occur, PVT would continue to provide this service under the Proposed Action.

PVT is recognized locally and nationally as being innovative with respect to responsible C&D debris management and their high rate (80%) of material diversion from the C&D landfill through advanced technologies for sorting, recycling, and reuse of C&D debris. PVT has also excavated materials from old landfill cells to recycle and reuse as much as possible. These practices have extended the life of the landfill. These practices are not required, but PVT set a new standard and trend in C&D debris management.

PVT’s sustainability practices support state and CCH goals for reducing our reliance on fossil fuels for energy production. These goals were developed after the State land use designation. PVT would continue investing in energy conservation and technology to generate renewable energy from C&D debris and the sun. The energy is and would be used onsite.

PVT has demonstrated they are responsible stewards of the environment. The PVT ISWMF (and the Proposed Action's) design and management exceeds the minimum regulatory standards for C&D facilities. PVT would continue to implement environmental protections (e.g., multi-layered impervious liner system to protect groundwater), and use landscaped buffers, topography, and fencing to shield the facility from the community.

PVT has demonstrated its commitment to the host community, as described in Section 5.3, *Socioeconomic Resources and Land Use Characteristics* including the financial and educational support that PVT provides. While it is uncommon for a community to welcome a waste management facility, PVT has made great strides in being a good neighbor and building a positive relationship with the community. PVT provides regular updates through the local newspaper and to the Nanakuli-Maili Neighborhood Board, which has expressed appreciation for PVT responsiveness to community concerns. PVT uses its influence to address community concerns "outside the fence" regarding speeding, street parking, adequate cover for material loads, and early arrivals. Other outreach efforts include facility tours (upon request) and hosting open houses (February 2019). The majority of PVT's employees are from the Waianae Region.

#### 6.2.2.6 Criterion 6. The Project Site Is Unsited For The Permissible Uses

Sixteen types of land uses are permissible on State Agricultural Land and, as stated in Section 6.2.1, *Permissible Uses in State Agricultural Districts*, the Proposed Action's land use is not included in the list. However, the Project Site is generally not suitable for the permissible uses on State Agricultural land. Table 6-5 summarizes the permissible land uses and Project Site's suitability for the land use (HRS § 205-2).

**Table 6-5 Suitability of Project Site for Permissible Uses in the Agricultural District**

Permissible Uses in Agricultural Districts (HRS § 205-2)	Project Site Suitability
(1) Activities or uses as characterized by the cultivation of crops, crops for bioenergy, orchards, forage, and forestry;	Not suitable for crop production (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ), forage or forestry. Agricultural use would require a substantial investment in water supply infrastructure that would be cost prohibitive for most farmers especially when there are lands more suitable.
(2) Farming activities or uses related to animal husbandry and game and fish propagation;	Not suitable for crop production or grazing, as described in the next section, Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> .
(3) Aquaculture, which means the production of aquatic plant and animal life within ponds and other bodies of water;	Not suitable for aquaculture because the site is inland and water (marine or potable) is not readily accessible.
(4) Wind-generated energy production for public, private, and commercial use;	Not suitable. A siting preference for wind turbines is the tops of hills because wind speed increases with altitude

Permissible Uses in Agricultural Districts (HRS § 205-2)	Project Site Suitability
	and the turbine would not be blocked by other land forms (US Energy Information Administration 2019). Wind turbines would have significant adverse impact on scenic resources and views to significant landforms. Wind turbines are also a hazard for birds. The Hawaii-protected Short-eared Owl and migratory bird species have been observed in Lualualei Valley (Section 3.7, <i>Biological Resources</i> ).
(5) Biofuel production for public, private, and commercial use;	Not suitable for the cultivation of bioenergy crops (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).
(6) Solar energy facilities, subject to specific conditions;	Potentially suitable. The Proposed Action includes PV arrays for onsite energy use, but solar energy is not the primary land use. Commercial-scale PV would not be economically viable.
(7) Bona fide agricultural services and uses that support the agricultural activities of the owner of the property and accessory to any of the above activities, regardless of whether conducted on the same premises as the agricultural activities to which they are accessory, including 1) farm dwellings, 2) employee housing, 3) farm buildings, mills, 4) mills, 5) storage facilities, 6) processing facilities, photovoltaic, biogas, and other small-scale renewable energy systems producing energy solely for use in the agricultural activities of the fee or leasehold owner of the property, agricultural-energy facilities, vehicle and equipment storage areas, and plantation community subdivisions;	Not suitable. The Project Site is not suitable for agricultural production (See Permissible Uses 1 and 2). The Landowner is not engaged in agricultural activities at the Project Site or other locations and would not propose agricultural support facilities. The Proposed Action includes PV and small-scale renewable energy systems for use onsite, but these are not the primary land uses and do not support agricultural activities.
(8) Wind machines and wind farms;	Not suitable. Commercial scale wind turbines would have a significant adverse impact on scenic resources and views to significant landforms (see Permissible Use [4]).
(9) Small-scale meteorological, air quality, noise, and other scientific and environmental data collection and monitoring facilities occupying less than one-half acre of land provided that these facilities shall not be used	Potentially suitable. The Project Site is suitable for minor data collection on less than 0.5 acres. The Proposed Action would not preclude the use of 0.5 acre for scientific monitoring.  PVT will be installing small-scale scientific and environmental data collection and monitoring equipment

Permissible Uses in Agricultural Districts (HRS § 205-2)	Project Site Suitability
as or equipped for use as living quarters or dwellings;	on the Project Site. The water quality and air quality data will be compiled and submitted to HDOH in compliance with permit conditions. No living quarters are proposed.
(10) Agricultural parks;	Not suitable for crop production or grazing (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).
(11) Agricultural tourism conducted on a working farm, or a farming operation for the enjoyment, education, or involvement of visitors;	Not suitable for crop production or grazing (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).
(12) Agricultural tourism activities, subject to specific conditions;	Not suitable. The Project Site is not suitable for agricultural production; therefore, it would not be conducive to agricultural tourism.
(13) Open area recreational facilities;	Potentially suitable; however, access from Lualualei Naval Road is subject to U.S. Navy approval and recreational uses (i.e., golf course) historically have been denied access. In addition, recreational use is not an economically viable use of the land from the Landowner perspective. The use of the Project Site as a C&D ISWMF would not preclude future use as a recreational facility when the site reached capacity and is closed.
(14) Geothermal resources exploration and geothermal resources development; and	Not suitable. The Waianae Caldera is in the vicinity of the Project Site and Lualualei has been identified as an area with geothermal development viability; however, the areas of interest are deeper in the valley on military land (Nicole Lautze et al. 2017).
(15) Agricultural-based commercial operations registered in Hawaii.	Not suitable for crop production or grazing (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).

The Project Site is potentially suitable for Permissible Uses (6) solar energy facilities, (9) small-scale meteorological, air quality, noise, and other scientific and environmental data collection and (13) open area recreational facilities. The Proposed Action would not preclude the use of the site for these purposes; but recreational use would be delayed until post-closure.

PVT designed the Proposed Action to preserve the open space character of the Project Site through landscaping, buffers, and berms. In the long term, when the facility is closed, heavy equipment and accessory structures would be removed, and the Project Site would appear as a low hill covered in natural vegetation. Closed landfills can be used for some open recreation.



### 6.2.2.7 Agricultural Productivity Ratings

This section describes four agricultural productivity assessments typically relied upon for an assessment of agricultural productivity:

- Important Agricultural Lands (IAL);
- University of Hawaii Land Study Bureau (LSB);
- Agricultural Lands of Importance in the State of Hawaii (ALISH); and
- Land Capability Groupings by USDA.

#### Important Agricultural Land

The IAL designation is a supplemental land use classification reserved for high quality farm land within the State Agricultural District. The LUC administers this classification in accordance with HRS § 205-47 and HAR § 15-15-17, *Important Agricultural Lands Designation and Proceedings*.

In identifying lands as IAL, State law defines IAL as those lands that:

1. Are capable of producing sustained high agricultural yields when treated and managed according to accepted farming methods and technology;
2. Contribute to the State's economic base and produce agricultural commodities for export or local consumption; or
3. Are needed to promote the expansion of agricultural activities and income for the future, even if currently not in production (HRS § 205-42(a)).

The counties are mandated to conduct a mapping process to identify lands within their jurisdiction to be recommended to the LUC for IAL designation. The evaluation process for IAL designation is based on a set of eight specific standards and criteria that represent the contributing factors to a viable and productive agricultural industry in Hawaii, as described in HRS § 205-44.

The IAL designation map is intended to overlay the existing State and county land use classification/zoning designations. It does not change existing classifications or affect the range of current permitted land uses.

The *Report on the Oahu Important Agricultural Land Mapping Project* (DPP 2018) and the IAL geographic information system mapping product were completed in August 2018. The three priority criteria for Oahu IAL designation were as follows:

1. Land currently used for agriculture (farming, grazing, ranching). The sources of data for this criterion included aerial imagery, state geographic information system data, and CCH real property taxation data (identifies agricultural exemptions [CSH 2019b]). The Project Site did not meet this criterion. As described in other sections of this Final EIS, the Project Site is not used for agriculture and no historical agricultural production was identified

(Section 5.1, *Archaeological and Historical Resources*; Section 5.2, *Cultural Resources*; and Section 5.3, *Socioeconomic Resources and Land Use Characteristics*).

Section 5.1, *Archaeological and Historical Resources* and Section 5.2, *Cultural Resources* describe historic land uses on the Project Site. There was no evidence of historic subsistence gathering of plant and aquatic resources or other agricultural production at the Project Site. In summary:

- Historic settlement patterns were heavily influenced by water resources. Land use in Lualualei was greatest near the coastal areas where marine resources were plentiful, and in the mountainous interior where there was sufficient rainfall. The intervening lands, including the Project Site, were dry scrubland and it is unlikely they would have been frequently utilized by Native Hawaiians. Archaeological evidence supports this assumption. Two pre-contract historic properties were identified at the Project Site, a stacked stone mound interpreted as a traditional Hawaiian marker and a basalt rock shelter. Artifacts found within the rock shelter site suggest it was used as a temporary habitation on an infrequent basis. Native Hawaiians likely took refuge from the mid-day heat or sought shelter while traveling between the deep valley and the coastline.
  - Journal entries from early European explorers, census data, and Mahele records have aided in the reconstruction of the agricultural landscape during the time of Western Contact. The coastal lowlands of Lualualei and Waianae Moku would have been cultivated with 'uala and niu, while valley areas would have been planted in kalo and wauke. CSH did not identify evidence of subsistence farming or gathering within the Project Site.
  - The Republic of Hawaii opened lands for homesteading in 1895. By the early 1920s, about 40 families had settled on homestead lots in Lualualei (CSH 2018). No homesteads were awarded at the Project Site.
  - By the early twentieth century, parcels within Lualualei Valley were used to grow sugar and pineapple and as grazing land. Historic maps from 1906, 1919, 1936, 1943, 1954, 1963, 1965, 1969, 1977, and 1993 show that the Project Site was largely vacant and was not used for the cultivation of crops or ranching (Appendix H).
- 2.** Land with soil qualities and growing conditions that support the production of food, fiber, or fuel and energy-producing crops. The evaluation was based on the Land Capability Groupings by the Soil Conservation Service of the USDA. The northwest and southwest portions of the Project Site were shown as meeting this IAL criterion in the initial February 2018 IAL map. As described below, the USDA soil classification data for the Project Site is inaccurate as determined by geotechnical investigations. Based on a review of the PVT

geotechnical data, DPP revised the IAL Criterion 2 map to show the actual soil types present at the Project Site do not meet this IAL criterion for productive soils.

3. Lands with access to sufficient qualities of water to support viable agriculture. The data sources for this criterion included state irrigation system data, state water use permits, BWS agricultural water rate data by parcel. The Project Site did not meet this criterion for adequate water supply. As described in Section 3.4, *Water Resources*, there is no access to potable water at the Project Site due in part to low rainfall and high salt content of the groundwater.

In summary, the Project Site did not meet any of the three priority criteria and is not recommended for IAL designation in the August 2018 IAL Map (Figure 6-1).

### Land Study Bureau

The University of Hawaii LSB conducted an *Overall Productivity Rating, Detailed Land Classification*. The LSB classification ratings are based on soil and productive capabilities for certain types of crops: pineapple, vegetables, sugarcane, forage, grazing, orchard, and forestry. The productivity potential ratings range from “A” (Very Good) to “E” (Very Poor), or “U” (Unclassified). Under the LSB system the Project Site has the lowest agricultural productivity rating “E” (Figure 6-1).

### Agricultural Lands of Importance in the State of Hawaii

Soil Conservation Service, University of Hawaii College of Tropical Agricultural and Human Resources, and the State of Hawaii Department of Agriculture designated Agricultural Lands of Importance in the State of Hawaii (ALISH) in 1977. The ALISH system was part of a national effort by the USDA to inventory important farmlands. The assessment was based on soil type, climate, water supply, and agricultural land use patterns. The three classifications are as follows:

- Prime: Best suited for production of food, feed, forage, and fiber crops.
- Unique: Useful for specific high value food crops (e.g., taro, coffee, rice, watercress).
- Other: Farmland of statewide or local importance.

No “Unique” lands were designated at or in the vicinity of the Project Site. “Prime” lands were designated in the northwest corner of the Project Site (1.17 acres) and “Other” lands were identified in the southwest corner of the Project Site (34.68 acres) (Table 6-2 and Figure 6-1). The USDA soil classification data discussed below in *Land Capability Groupings by USDA*, was relied upon in the ALISH study. The areas of inaccurate USDA soil classification data found in the IAL determination coincide with the inaccurate ALISH Prime and Other designated areas at the Project Site. As described in Section 3.2, *Topography, Geology, and Soils* and Appendix A, the subsurface investigations at the Project Site determined there are no ALISH at the Project Site.

### Land Capability Groupings by USDA

The soil types and land capability groupings identified by the Soil Conservation Service of USDA were published in the 1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* (Foote et al., 1972) and are incorporated into the online Soil Survey Geographic Database, USDA Natural Resources Conservation Service. With respect to the Project Site, the soil types and land capability groupings have not changed since 1972.

The areas mapped by the USDA are based on a limited number of test pits excavated throughout the State and then correlated to aerial photography. None of the USDA test pits were on the Project Site. The soil scientists drew the boundaries of the individual soils based on aerial photographs. The photographs were used to show woodlands, buildings, field borders, trees, and other details to help draw the soil boundaries. It was not practical to conduct subsurface investigations on all parcels throughout the State to field verify the soil classifications; therefore, the maps have limited accuracy. The PVT geotechnical data demonstrated that the aerial photographs did not accurately predict soil types.

The USDA assigns a Capability Class rating to each soil type for two scenarios: irrigated and non-irrigated (i.e., relying on natural rainfall). The ratings range from Class I to Class VIII, with Class I having the best agronomic qualities for crop and livestock production, and Class VIII having the least. Classes I, II, and III soils are described as follows:

- Class I soils have slight limitations that restrict their use.
- Class II soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
- Class III soils have severe limitations that reduce the choice of plants or require special conservation practices, or both.

As described in Section 3.2, *Topography, Geology, and Soils* and Appendix A, the four soil types identified at the Project Site are listed in Table 6-6 and shown on Figure 3-8. No Class I or II soils were identified at the Project Site. The majority of the parcel is characterized as having soil types that are not suitable for agriculture due to prevalence of rocks, boulders, and stones. USDA identified two small areas of soil types that are considered Capability Class III, having severe limitations for agriculture, and only if irrigated, as follows:

- Mamala Stony Silty Clay Loam, 0 to 12 percent slopes (MnC): limited capability because the soil is shallow, droughty, or stony.
- Lualualei Clay, 2 to 6 percent slopes (LuB): limited capability because of risk of erosion unless close growing ground cover is maintained.

**Table 6-6 Soil Types and Land Capability Groupings at the Project Site**

USDA (Figure 3-8)			
Soil Type (location on Project Site)	Capability Class		Capability Unit (Group)
	Irrigated	Non-irrigated	
Mamala Stony Silty Clay Loam, 0 to 12 percent slopes (MnC) (southwestern portion)	III <sub>s</sub>	VI <sub>s</sub>	Sugarcane (1); and pasture (2), only if irrigated
Lualualei Clay, 2 to 6 percent slopes (LuB) (northwest corner)	III <sub>e</sub>	VI <sub>s</sub>	Sugarcane (4); pasture (2); and woodland (4), only if irrigated
Lualualei Extremely Stony Clay, 3 to 35 percent slopes (LPE) (majority of Project Site)	none	VII <sub>s</sub>	Not suitable for agriculture
Rock Land (rRK) (southeastern corner)	none	VII <sub>s</sub>	Not suitable for agriculture

s: limited because the soil is shallow, droughty, or stony;

e: limited because of risk of erosion unless close growing ground cover is maintained.

Sources: Foote et al., 1972, Juturna 2019 (Appendix A).

As described in Section 3.2, *Topography, Geology, and Soils* and Appendix A, the subsurface geotechnical investigations at the Project Site identified inaccuracies in the USDA map, as shown on Figure 3-9, the revised soil map. The soils at the Project Site are more consistent with the rocky stony soils that are not suitable for agriculture. The revised map includes a fifth soil type, Coral outcrop (CR), identified at the southern boundary. Coral outcrop consists of coral and cemented sand, and is not suitable for agriculture.

The CIA (CSH 2019) did not identify traditional farming or gathering practices at the Project Site in their outreach activities. Shad Kane shared his knowledge of the Project Site and vicinity. He was not aware of traditional gathering practices occurring at the Project Site, and states, “Most of that region had foreign weeds...I do not recall even seeing uhaloa growing.” Uhaloa (*Waltheria indica*) is a traditional medicinal plant that thrives in hot, dry, and windy places. The CIA describes the cultural importance of farming (large- and small-scale) but did not find evidence of crop cultivation or subsistence farming on the Project Site.

### **6.2.3 Hawaii State Plan (State Planning Act)**

The State Plan (HRS Ch. 226) is a broad policy document that guides all activities, programs, and decisions made by local and State agencies. It is divided into three parts, Part I (Overall Theme, Goals, and Policies); Part II (Planning, Coordination and Implementation); and Part III (Priority Guidelines).

#### **6.2.3.1 Part I: Overall Theme, Goals, Objectives, and Policies.**

Parts I and III objectives and the Proposed Action’s consistency with those objectives are listed in Table 6-7 and Table 6-8, respectively.



Part II directs various state agencies to prepare Functional Plans and each county to prepare a General Plan (See Section 6.3.1, *Oahu General Plan*).

**Table 6-7 Consistency with Hawaii State Plan**

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>HRS § 226-4: State Goals</b>			
<p>In order to guarantee, for the present and future generations, those elements of choice and mobility that insure 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:</p> <p>(1) A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawaii's present and future generations.</p> <p>(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.</p> <p>(3) Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life.</p>	X		
<p><b>Discussion:</b> The Proposed Action would support these three goals by</p> <p>(1) providing current and future employment opportunities to Oahu residents and revenues to the State and CCH;</p> <p>(2) providing a critical public health service that discourages illegal dumping and provides responsible debris management to maintain natural resources;</p> <p>(3) continuing to engage the community in a meaningful way; and</p> <p>(4) continuing to invest in sustainable practices that support community goals for maximizing recycling and reuse of waste and investing in renewable energy solutions.</p>			
<b>HRS § 226-5: Objectives and Policies for Population</b>			
(a) <b>Objective:</b> 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.	x		
<b>(b) Policies:</b>			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii'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 Hawaii's people to pursue their socio-economic aspirations throughout the islands.	X		

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.	X		
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			X
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			X
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.			X
<b>Discussion:</b> The Proposed Action would not induce or directly affect the population but would provide jobs and job training on Oahu. PVT would continue to encourage public and agency tours of their facilities to educate the public on the need for sustainable C&D waste recovery and reuse practices to reduce the land required for landfills and to introduce the renewable energy technologies employed onsite.			
<b>HRS § 226-6: Objectives and Policies for the Economy in General</b>			
(a) <b>Objectives:</b> 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 Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.  (2) A steadily growing and diversified economic base that is not overly dependent on a few industries and includes the development and expansion of industries on the neighbor islands.	X		
<b>(b) Policies:</b>			
(1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.			X
(2) Expand Hawaii'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 Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.			X
(4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii.			X
(6) Seek broader outlets for new or expanded Hawaii business investments.			X
(7) Expand existing markets and penetrate new markets for Hawaii's products and services.	X		
(8) Assure that the basic economic needs of Hawaii'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 Hawaii'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 Hawaii.	X		
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii'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 Hawaii's workers.	X		
(16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.	X		
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			X
(18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.	X		
(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	X		
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.	X		
(21) Foster a business climate in Hawaii - including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
expansion of existing enterprises and the creation and attraction of new business and industry.			
<p><b>Discussion:</b> PVT would continue to invest in the latest technology and innovation for diverting debris from the landfill. Sorting debris for recycling is labor intensive. PVT would continue to employ residents of the Waianae Region, an area that has a high unemployment rate. PVT abides by affirmative action and nondiscriminatory hiring regulations. The pay scale is comparable to the rest of Oahu in similar economic sectors. On the job training that is aimed at all literacy levels would continue to be provided. Health and safety, and emergency response training is provided to all employees. Working conditions are good with an emphasis on health and safety.</p> <p>PVT provides a critical public service that has a financial multiplier effect on the economy and supports the construction industry. For every job retained, 1.38 additional jobs in the island economy would be supported and for every \$1 earned directly by PVT staff, others in the economy earn an additional \$1.02 (DBEDT 2016).</p> <p>PVT's recycling operations not only divert C&amp;D debris from the landfill but creates economically-viable products for reuse on Oahu. With the Proposed Action, PVT would continue to generate aggregate for use by the construction industry and feedstock for use by renewable energy providers. Feedstock generated from C&amp;D debris is a sustainable, renewable, and local source of energy. The Proposed Action would also generate renewable energy to power PVT's facilities.</p> <p>The Proposed Action would not have significant impacts on scenic resources (Section 5.4, <i>Scenic Resources</i>).</p> <p>PVT would continue to offer educational tours of the ISWMF, promoting awareness of sustainable waste management technologies. In addition, PVT would continue to support education opportunities through their scholarship program and participation in community activities that promote environmental sustainability.</p>			
<b>HRS § 226-7: Objectives and Policies for the Economy-Agriculture</b>			
<p><b>(a) Objectives:</b> Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</p> <p>(1) Viability of Hawaii's sugar and pineapple industries.</p> <p>(2) Growth and development of diversified agriculture throughout the State.</p> <p>(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.</p>			X
<b>(b) Policies:</b>			
(1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			X
(2) Encourage agriculture by making 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

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	Yes	No	N/A
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.			X
(6) Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.			X
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii'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 Hawaii'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
(13) Promote economically competitive activities that increase Hawaii'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
<b>Discussion:</b> The objectives and policies relating to agriculture are not applicable because the Project Site is not suitable for agriculture (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).			
<b>HRS § 226-8: Objectives and Policies for the Economy-Visitor Industry</b>			
(a) <b>Objective:</b> Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.			X
<b>(b) Policies:</b>			
(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.			X



PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.			X
(3) Improve the quality of existing visitor destination areas by utilizing Hawaii's strengths in science and technology.			X
(4) Encourage cooperation and coordination between the government 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 Hawaii's people.			X
(6) Provide opportunities for Hawaii'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 Hawaii'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 Hawaii's cultures and values.			X
<b>Discussion:</b> The objectives and policies relating to the visitor industry are not applicable to the Proposed Action.			
<b>HRS § 226-9: Objective and Policies for the Economy-Federal Expenditures</b>			
(a) <b>Objective:</b> Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.			X
<b>(b) Policies:</b>			
(1) Encourage the sustained flow of federal expenditures in Hawaii 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 Hawaii that respect state-wide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment.			X
(4) Increase opportunities for entry and advancement of Hawaii's people into federal government service.			X
(5) Promote federal use of local commodities, services, and facilities available in Hawaii.			X
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(7) Pursue the return of federally controlled lands in Hawaii 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
<b>Discussion:</b> The Proposed Action will not require federal expenditures.			
<b>HRS § 226-10: Objectives and Policies for the Economy-Potential Growth and Innovative Activities</b>			
(a) <b>Objective:</b> Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawaii's economic base.	X		
<b>(b) Policies:</b>			
(1) Facilitate investment and employment in economic activities that have the potential to expand and diversify Hawaii'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 Hawaii 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
(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 Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people.			X
(7) Enhance and promote Hawaii'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 Hawaii's geographic, environmental, social, and technological advantages to attract new economic activities into the State.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawaii'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 Hawaii's ability to attract and develop economic activities of benefit to Hawaii.			X
(13) Foster a broader public recognition and understanding of the potential benefits of new, or innovative growth-oriented industry in Hawaii.	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 non-fossil fuel and energy efficient modes of transportation.	X		
(17) Recognize and promote health care and health care information technology as growth industries.			X
<b>Discussion:</b> The Proposed Action would continue to use and support innovative, renewable energy technologies that reduce Hawaii's reliance on fossil fuels. Feedstock generated from C&D debris is a sustainable, renewable, and local source of energy. The Proposed Action would generate renewable energy to power PVT's facilities. PVT proposed to install a PV system and a gasification unit or anaerobic digestion system. PVT has and will continue to invest in hybrid heavy equipment that consumes less diesel fuel. PVT welcomes opportunities to educate the public on the technology used at the PVT ISWMF.			
<b>HRS § 226-10.5: Objectives and Policies for the Economy-Information Industry</b>			
(a) <b>Objective:</b> Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.			X
<b>(b) Policies:</b>			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaii and between Hawaii 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 Hawaii to accommodate future growth and innovation in Hawaii's economy.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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 Hawaii as a broker, creator, and processor of information in the Pacific.			X
<b>Discussion:</b> The Proposed Action is not related to the information industry; therefore, this objective and these policies are not applicable.			
<b>HRS § 226-11: Objectives and Policies for the Physical Environment-Land-Based, Shoreline, and Marine Resources</b>			
(a) <b>Objectives:</b> Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives: (1) Prudent use of Hawaii's land-based, shoreline, and marine resources. (2) Effective protection of Hawaii's unique and fragile environmental resources.	X		
<b>(b) Policies:</b>			
(1) Exercise an overall conservation ethic in the use of Hawaii'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

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.	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		
<p><b>Discussion:</b> The Project Site is located approximately 2,000 feet inland of the shoreline and would have no impact on marine or shoreline resources. Natural resources will be protected through adherence to state water quality standards and permit requirements. As discussed in Section 3.7, <i>Biological Resources</i>, the Proposed Action would have no impact on unique or fragile environmental resources. No rare or endangered plant, animal species, or habitats were present at the Project Site.</p> <p>The physical attributes of the Project Site were accommodated in the site design and development plan. Hawaii's conservation ethic is supported by PVT's ability to divert 80% of the waste from the landfill through recycling and reuse and their investment in renewable energy technology. PVT would continue to rely on non-potable water to the extent practical to reduce the use of potable water. Landscaping would be drought tolerant. The proposed land use is compatible with the existing built environment and ecology of the area.</p>			
<p><b>HRS § 226-12: Objective and Policies for the Physical Environment-Scenic, Natural Beauty, and Historic Resources</b></p>			
(a) <b>Objective:</b> Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.	X		
<b>(b) Policies:</b>			
(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 Hawaii's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	X		
<p><b>Discussion:</b> As described in Section 5.4, <i>Scenic Resources</i>, the Proposed Action would have no direct or indirect impact on "scenic vistas and view planes" identified in county or state plans or studies. The Proposed Action would not be visible from most of the public areas in the community due to intervening built environment and topography. The Proposed Action will be visible from a few public places in the community</p>			



PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<p>and the potential impacts will be mitigated by the site development design, berms, buffers, trees, and topography. There would be few observers and the impact on the visual character of the community is considered less than significant. Ultimately, upon landfill closure the Project Site would appear as a hill covered by buffelgrass and dwarfed by Puu Heleakala.</p> <p>Three historic properties were identified on the Project Site but would be outside the site development area. SHPD-approved <i>Preservation Plan</i> would be implemented to provide long-term protection for one of the three historic properties identified onsite (Section 5, <i>Historic, Socioeconomic, and Scenic Resources</i>). A determination of “no historic properties affected” by the Proposed Action is recommended by CSH, as per HAR § 13-13-284-7 (CSH 2018).</p> <p>No traditional cultural practices or properties were identified at the Project Site. The Project Description includes provisions for responding to an inadvertent discovery of bones or historic artifacts during site development.</p>			
<b>HRS § 226-13: Objectives and Policies for the Physical Environment-Land, Air, and Water Quality</b>			
<b>(a) Objectives:</b> Planning for the State’s physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives: <b>(1)</b> Maintenance and pursuit of improved quality in Hawaii’s land, air, and water resources. <b>(2)</b> Greater public awareness and appreciation of Hawaii’s environmental resources.	X		
<b>(b) Policies:</b>			
<b>(1)</b> Foster educational activities that promote a better understanding of Hawaii’s limited environmental resources.	X		
<b>(2)</b> Promote the proper management of Hawaii’s land and water resources.			X
<b>(3)</b> Promote effective measures to achieve desired quality in Hawaii’s surface, ground, and coastal waters.	X		
<b>(4)</b> Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii’s people.	X		
<b>(5)</b> 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		
<b>(6)</b> Encourage design and construction practices that enhance the physical qualities of Hawaii’s communities.	X		
<b>(7)</b> Encourage urban developments in close proximity to existing services and facilities.			X
<b>(8)</b> Foster recognition of the importance and value of the land, air, and water resources to Hawaii’s people, their cultures and visitors.	X		
<b>Discussion:</b> The Proposed Action would meet applicable regulations related to: 1) surface, ground, and coastal waters; and 2) air quality (Section 3, <i>Natural Environment</i> ). PVT has considered natural and man-			

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<p>induced hazards in the siting, design, and future operation of the Proposed Action, including slope instability, flooding, tsunamis, hurricanes, and seismic events. In the event of natural or man-induced disaster, the PVT ISWMF emergency management plan would be implemented to minimize the threat to life and property.</p> <p>The Proposed Action would be constructed in accordance with applicable regulations and permits using standard construction best management practices to avoid or minimize environmental impacts. Additionally, adequate services and utilities are available on or in the vicinity of the Project Site, as described in Section 4, <i>Public Infrastructure and Services</i>.</p>			
<b>HRS § 226-14: Objective and Policies for Facility Systems-In General</b>			
<b>(a) Objective:</b> 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.	X		
<b>(b) Policies:</b>			
<b>(1)</b> Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	X		
<b>(2)</b> Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.	X		
<b>(3)</b> Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.	X		
<b>(4)</b> Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X
<b>Discussion:</b> While the Proposed Action does not involve planning for the State's facility systems, PVT is a critical part of the CCH's <i>Integrated Solid Waste Management Plan</i> . PVT provides C&D debris management services at no cost to the CCH or taxpayers.			
<b>HRS § 226-15: Objectives and Policies for Facility Systems-Solid and Liquid Wastes</b>			
<b>(a) Objectives:</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:			
<b>(1)</b> Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	X		
<b>(2)</b> Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			X
<b>(b) Policies:</b>			
<b>(1)</b> Encourage the adequate development of sewerage facilities that complement planned growth.			X

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	Yes	No	N/A
(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 disposal of solid and liquid wastes.			X
<b>Discussion:</b> PVT is the State's largest recycler by volume. The current PVT ISWMF operation recycles or reuses approximately 80 percent of incoming C&D debris. PVT's recycling operations not only divert C&D debris from the landfill but creates economically viable products for reuse on Oahu. PVT ISWMF is the only facility on Oahu permitted to solidify liquid waste. The Proposed Action would allow PVT to continue their recycling operation and provide an environmentally secure site for the disposal of non-hazardous, non-recyclable C&D waste.			
<b>HRS § 226-16: Objective and Policies for Facility Systems-Water</b>			
(a) <b>Objective:</b> Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.	X		
<b>(b) Policies:</b>			
(1) Coordinate development of land use activities with existing and potential water supply.	X		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			X
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.	X		
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			X
(5) Support water supply services to areas experiencing critical water problems.			X
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.	X		
<b>Discussion:</b> The Proposed Action would rely on non-potable water to the extent practical to reduce reliance on potable water. Stormwater would be allowed to infiltrate the soils or be used for irrigation. Landscaping would be limited to drought tolerant plants.			
<b>HRS § 226-17: Objectives and Policies for Facility Systems-Transportation</b>			
(a) <b>Objectives:</b> Planning for the State's facility systems with regard to energy shall be directed toward 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.			X

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	Yes	No	N/A
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			
<b>(b) Policies:</b>			
(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 interisland movement of people and goods;			X
(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 Hawaii's natural environment;			X
(11) Encourage safe and convenient use 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; and			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.	X		
<b>Discussion:</b> The Proposed Action is not related to transportation and the objectives are generally not applicable; however, PVT continues to invest in hybrid heavy equipment that consumes less diesel fuel.			
<b>HRS § 226-18: Objectives and Policies for Facility Systems-Energy</b>			
<b>(a) Objectives:</b> Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation;	X		
(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;	X		
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and			X
(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.			X
<b>(b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably priced, and dependable energy services to accommodate demand.</b>			X
<b>(c) Other Policies:</b>			
(1) Support research and development as well as promote the use of renewable energy sources;	X		
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient 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
<b>(4) Promote all cost-effective conservation of power and fuel supplies through measures including:</b>			
<b>(A)</b> Development of cost-effective demand-side management programs;	X		
<b>(B)</b> Education;	X		
<b>(C)</b> Adoption of energy-efficient practices and technologies; and	X		
<b>(D)</b> Increasing energy efficiency and decreasing energy use in public infrastructure.			X
(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		



PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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; and			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
<p><b>Discussion:</b> Many of the objectives are state program-based and not relevant to the Proposed Action. However, PVT would continue to invest in and support renewable energy technologies to reduce Hawaii's reliance on fossil fuel and reduce the demand of their operations on HECO services. The Proposed Action includes solar power generation and reusing organic waste to generate electricity. Additionally, PVT's recycling operations generates feedstock for use by renewable energy providers. PVT welcomes visitors to learn more about the PVT ISWMF renewable energy and other sustainable technologies. PVT is an early adopter of using hybrid heavy equipment to replace their older equipment, which reduces their vehicle emissions. All equipment is regularly maintained, and equipment operators are encouraged to turn off their engines rather than idling when practical to further reduce emissions.</p>			
<b>HRS § 226-18.5: Objectives and Policies for Facility Systems- Telecommunications</b>			
(a) <b>Objective:</b> Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			X
(b) <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.</b>			
<b>(c) Other Policies:</b>			
(1) Facilitate research and development of telecommunications systems and resources;			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			X
(3) Promote efficient management and use of existing telecommunications systems and services; and			X
(4) Facilitate the development of education and training of telecommunications personnel.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Discussion:</b> The Proposed Action would have no effect on telecommunications services; therefore, these objectives and policies are not applicable.			
<b>HRS § 226-19: Objectives and Policies for Socio-Cultural Advancement-Housing</b>			
<b>(a) Objectives:</b> Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives: <b>(1)</b> 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 affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population. <b>(2)</b> The orderly development of residential areas sensitive to community needs and other land uses. <b>(3)</b> The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			X
<b>(b) Policies:</b>			
<b>(1)</b> Effectively accommodate the housing needs of Hawaii's people.			X
<b>(2)</b> Stimulate and promote feasible approaches that increase housing choices for low- income, moderate-income, and gap-group households.			X
<b>(3)</b> Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			X
<b>(4)</b> Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			X
<b>(5)</b> 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
<b>(6)</b> Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			X
<b>(7)</b> Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.			X
<b>(8)</b> Promote research and development of methods to reduce the cost of housing construction in Hawaii.			X
<b>Discussion:</b> The Proposed Action would not induce population change or increase the demand for housing; therefore, these objectives and policies are not applicable.			
<b>HRS § 226-20: Objectives and Policies for Socio-Cultural Advancement-Health</b>			
<b>(a) Objectives:</b> Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
<b>(1)</b> Fulfillment of basic individual health needs of the general public.			X

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.	X		
(3) Elimination of health disparities by identifying and addressing social determinants of health.			X
<b>(b) Policies:</b>			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			X
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			X
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.	X		
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	X		
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			X
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities			X
<b>Discussion:</b> Many of the objectives are state program-based and not relevant to the Proposed Action. However, PVT would continue to maintain the environmentally healthful conditions in the community through adherence to environmental protections, monitoring and reporting requirements of the SWMP. PVT has a wellness program including paid time off for wellness visits with health care providers and fitness equipment for employees. PVT would also continue to provide an environmentally secure site for the disposal of non-hazardous, non-recyclable C&D waste.			
<b>HRS § 226-21: Objective and Policies for Socio-Cultural Advancement-Education</b>			
(a) <b>Objective:</b> Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.	X		
<b>(b) Policies:</b>			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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
(9) Support research programs and activities that enhance the education programs of the State.			X
<b>Discussion:</b> The education objectives and policies are not directly applicable to the Proposed Action, but PVT would continue to financially support community groups that promote education, sports teams, and fund the PVT College Scholarship Program. In addition, PVT acknowledges that literacy skills may affect advancement and safety, therefore, training is aimed at various levels of ability.			
<b>HRS § 226-22: Objective and Policies for Socio-Cultural Advancement-Social Services</b>			
(a) <b>Objective:</b> Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			X
<b>(b) Policies:</b>			
(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

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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
<b>Discussion:</b> The Proposed Action does not plan for the State's socio-cultural advancement with regard to social services; therefore, these objectives and policies are not applicable.			
<b>HRS § 226-23: Objective and Policies for Socio-Cultural Advancement-Leisure</b>			
(a) <b>Objective:</b> 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.			X
<b>(b) Policies:</b>			
(1) Foster and preserve Hawaii'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
(5) Ensure opportunities for everyone to use and enjoy Hawaii'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 Hawaii'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 Hawaii's population to participate in the creative arts.			X
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X
<b>Discussion:</b> The Proposed Action would have no impact on the State's advancement of recreational resources; therefore, these objectives and policies are not applicable. However, PVT has a wellness program including paid time off for wellness visits with health care providers and fitness equipment for employees.			



PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>HRS § 226-24: Objective and Policies for Socio-Cultural Advancement-Individual Rights and Personal Well-being</b>			
<b>(a) Objective:</b> 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.	X		
<b>(b) Policies:</b>			
<b>(1)</b> 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
<b>(2)</b> Uphold and protect the national and state constitutional rights of every individual.			X
<b>(3)</b> Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
<b>(4)</b> Ensure equal opportunities for individual participation in society.	X		
<b>Discussion:</b> PVT provides employment that supports individual socioeconomic needs, is an equal opportunity employer and provides a safe working environment.			
<b>HRS § 226-25: Objective and Policies for Socio-Cultural Advancement-Culture</b>			
<b>(a) Objective:</b> 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 Hawaii's people.			X
<b>(b) Policies:</b>			
<b>(1)</b> Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.			X
<b>(2)</b> Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.			X
<b>(3)</b> Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			X
<b>(4)</b> Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors.			X
<b>Discussion:</b> The Proposed Action is not applicable to the State's efforts to enhance cultural identities, traditions, values, customs, and arts of Hawaii's people. However, PVT conducted archaeological and cultural impact studies of the Project Site and vicinity to identify potential resources that could be affected by the Proposed Action (Section 5.1, <i>Archaeological and Historical Resources</i> ; Section 5.2, <i>Cultural Resources</i> ; Appendices G and H). No traditional cultural practices were identified, and the three historic sites identified would not be within the development area. Although inadvertent disturbance during construction is unlikely, a <i>Preservation Plan</i> for one of the historic sites was developed and accepted by			

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
SHPD to provide long-term protection of the historic site and it will be implemented as part of the Proposed Action (Section 5.1, <i>Archaeological and Historical Resources</i> and Appendix G).			
<b>HRS § 226-26: Objectives and Policies for Socio-Cultural Advancement-Public Safety</b>			
<b>Objectives:</b> 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.			X
(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.	X		
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			X
<b>(b) Policies Related to Public Safety:</b>			
(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
<b>(c) Policies Related to Criminal Justice:</b>			
(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
<b>(d) Policies Related to Emergency Management:</b>			
(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		
<b>Discussion:</b> The Proposed Action would continue PVT's ability to support the CCH disaster management plan as the designated location for debris management during disaster recovery. PVT coordinates with State and County emergency officials to plan for emergencies. Employees are trained on emergency response procedures.			

PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>HRS § 226-27: Objectives and Policies for Socio-Cultural Advancement-Government</b>			
<b>(a) Objectives:</b> Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives: <b>(1)</b> Efficient, effective, and responsive government services at all levels in the State. <b>(2)</b> Fiscal integrity, responsibility, and efficiency in the state government and county governments.			X
<b>(b) Policies:</b>			
<b>(1)</b> Provide for necessary public goods and services not assumed by the private sector.			X
<b>(2)</b> Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			X
<b>(3)</b> Minimize the size of government to that necessary to be effective.			X
<b>(4)</b> Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			X
<b>(5)</b> Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			X
<b>(6)</b> Provide for a balanced fiscal budget.			X
<b>(7)</b> Improve the fiscal budgeting and management system of the State.			X
<b>(8)</b> 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
<b>Discussion:</b> The PVT ISWMF is a privately-owned facility; therefore, these objectives and policies are not applicable. However, PVT does provide a critical service to government that supports government's ability to meet goals of efficient and effective solid waste management at no cost to government.			

#### 6.2.3.2 Part III: Priority Guidelines

The purpose of Part III of the Hawaii State Plan is to establish overall priority guidelines to address areas of statewide concern. The Hawaii State Plan notes that the State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: 1) economic development; 2) population growth and land resource management; 3) affordable housing; 4) crime and criminal justice; and 5) quality education (HRS § 226-102). The priority guidelines to the Proposed Action are discussed in Table 6-8.

**Table 6-8 Part III Priority Guidelines**

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>HRS § 226-103: Economic Priority Guidelines</b>			
<b>(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:</b>			
<b>(1)</b> Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			X
<b>(A)</b> Encourage investments which:			
(i) Reflect long term commitments to the State;			X
(ii) Rely on economic linkages within the local economy;			X
(iii) Diversify the economy;			X
(iv) Reinvest in the local economy;			X
(v) Are sensitive to community needs and priorities; and			X
(vi) Demonstrate a commitment to provide management opportunities to Hawaii residents; and			X
<b>(B)</b> Encourage investments in innovative activities that have a nexus to the State, such as:			
(i) Present or former residents acting as entrepreneurs or principals;			X
(ii) Academic support from an institution of higher education in Hawaii;			X
(iii) Investment interest from Hawaii residents;			X
(iv) Resources unique to Hawaii that are required for innovative activity; and			X
(v) Complementary or supportive industries or government programs or projects.	X		
<b>(2)</b> Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
<b>(3)</b> 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
<b>(4)</b> Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			X
<b>(5)</b> Streamline the processes for building and development permit and review and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety, and welfare would not be adversely affected.			X
<b>(6)</b> Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors.			X

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(7) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii 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 Hawaii's unique location and available physical and human resources.			X
(B) A clean industry that would have minimal adverse effects on Hawaii's environment.	X		
(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.	X		
(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 Hawaii business.			X
(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:			
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			X
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			X
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			X
(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.			X
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.	X		
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
<b>Discussion:</b> The Proposed Action is not a State plan; however, it would continue to provide a critical public service through the private sector at no cost to government. PVT would continue to employ local residents and provide training. The PVT operations provide significant revenue to the State and CCH government. PVT invests in new technologies that are complementary to government goals for recycling and renewable energy, which are clean industries.			
<b>(b) Priority guidelines to promote the economic health and quality of the visitor industry:</b>			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.			X



PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	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 provide 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 Hawaii's significant natural, scenic, historic, and cultural resources.			X
(5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.			X
(6) Support and coordinate tourism promotion abroad to enhance Hawaii'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
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			X
<b>Discussion:</b> The above priority guidelines regarding the visitor industry are not applicable to the Proposed Action.			
<b>(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:</b>			
(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 Hawaii.			X
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
<b>Discussion:</b> The above priority guidelines regarding the sugar and pineapple industries are not applicable to the Proposed Action.			
<b>(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:</b>			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aqua cultural uses of such lands.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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 Hawaii's agricultural community.			X
(6) Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aqua cultural 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
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(10) Support the continuation of land currently in use for diversified agriculture.			X
(11) Encourage residents and visitors to support Hawaii's farmers by purchasing locally grown food and food products.			X
<b>Discussion:</b> The above priority guidelines regarding diversified agriculture and aquaculture are not applicable to the Proposed Action because the Project Site has never been used for agriculture and is not suitable for agriculture (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ).			
<b>(e) Priority guidelines for water use and development:</b>			
(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
<b>Discussion:</b> The Proposed Action would rely on non-potable water to the extent practical to conserve potable water resources. Wherever possible, landscaping will incorporate native and drought tolerant plants.			
<b>(f) Priority guidelines for energy use and development:</b>			
(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		

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(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		
<b>Discussion:</b> The Proposed Action would continue to use and support innovative, renewable energy technologies that reduce Hawaii's reliance on fossil fuels. Feedstock generated from C&D debris is a sustainable, renewable, and local source of energy. The Proposed Action would generate renewable energy to power PVT's facilities. PVT proposes to install a PV system and a gasification unit or anaerobic digestion system. In addition, PVT would continue to invest in hybrid heavy equipment to reduce their reliance on fossil fuel.			
<b>(g) Priority guidelines to promote the development of the information industry:</b>			
(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
<b>Discussion:</b> The above priority guidelines regarding the information industry are not applicable to the Proposed Action.			
<b>HRS § 226-104: Population Growth and Land Resources Priority Guidelines</b>			
<b>(a) Priority guidelines to effect desired statewide growth and distribution:</b>			
(1) Encourage planning and resource management to ensure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.			X

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(2) Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii'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>(b) Priority guidelines for regional growth distribution and land resource utilization:</b>			
(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 nonessential 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 noncontiguous 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 Kakaako 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
(10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean);			X

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
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.			
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawaii'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 Hawaii's shoreline, open spaces, and scenic resources.			X
<b>Discussion:</b> The applicant for the Proposed Action is in the private sector and would continue to provide a critical public service at no cost to government, while providing revenues to the State and CCH. The Proposed Action also provides an appropriate use of non-essential, marginal agricultural lands.			
<b>HRS § 226-105: Crime and Criminal Justice</b>			
<b>Priority guidelines in the area of crime and criminal justice:</b>			
(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
<b>Discussion:</b> Most of these guidelines are state program-based and not relevant to the Proposed Action. However, the Proposed Action would provide an alternative to illegal dumping of C&D waste.			
<b>HRS § 226-106: Affordable Housing</b>			
<b>Priority guidelines for the provision of affordable housing:</b>			
(1) Seek to use marginal or nonessential 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



PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	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 Hawaii'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 Hawaii'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
<b>Discussion:</b> The Proposed Action would have no impact on affordable housing priority guidelines.			
<b>HRS § 226-107: Quality Education</b>			
<b>Priority guidelines to promote quality education:</b>			
(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;			X
(B) Statewide electronic mail; and			X
(C) Access to the Internet.			X
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 Hawaii'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; and			X

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(9) Strengthen and expand educational programs and services for students with special needs.			X
<b>Discussion:</b> The above priority guidelines regarding quality education are not applicable to the Proposed Action; however, PVT would continue to support education through tours of the site and the PVT scholarship program.			
<b>HRS § 226-108: Sustainability</b>			
Priority guidelines and principles to promote sustainability shall include:			
(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 ahupuaa system; and			X
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.	X		
<b>Discussion:</b> Sustainability requires balancing economic, environmental, and social considerations. The Proposed Action provides opportunities for short-term and long-term employment and revenues to the State and CCH; PVT demonstrates environmental stewardship through the use of non-potable water, responsible stormwater management infrastructure; protection of historic and cultural resources; recycling/reuse practices to maximize the diversion of waste from the landfill; and investment in renewable energy technologies. In addition, PVT would continue to support the host community by providing local employment, on-the-job training, and funding community activities and college scholarships. PVT would continue to respond quickly to any concerns about their operations or the PVT ISWMF traffic.			
<b>HRS § 226-109: Climate Change Adaptation Priority Guidelines</b>			
Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			
(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

PART III. PRIORITY GUIDELINES HRS Ch. 226	Is Proposed Action Consistent?		
	Yes	No	N/A
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;			X
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;	X		
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;			X
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;	X		
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			X
<b>Discussion:</b> The Proposed Action is appropriately sited inland of the forecasted sea level rise inundation zone, as described in Section 3.3, <i>Natural Hazards</i> . The anticipated increase in storm events and rainfall volume is addressed in the PVT stormwater management system design. The government meteorological service provides advance warning of pending severe storm events and PVT will implement their emergency management plan to provide for the safety of its employees and the community in the event of a natural disaster. PVT has post-disaster responsibility to receive disaster debris and the clearing of Waianae roadway access would be a priority.			

#### 6.2.4 State Functional Plans

The Hawaii State Plan directs State agencies to prepare functional plans for their respective program areas (HRS § 226-55 through § 226-57). There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawaii State Plan:

- Agriculture
- Housing
- Conservation lands
- Recreation
- Employment
- Tourism
- Energy
- Transportation
- Health
- Human services
- Education and higher education
- Employment
- Historic preservation
- Water resources development

The Functional Plans' applicability to the Proposed Action, along with each plan's applicable objectives, policies, and actions, are discussed in Table 6-9.

**Table 6-9 Consistency with State Functional Plans**

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Agriculture Functional Plan</b>				
<b>Objective A:</b>	Achievement of increased agricultural production and growth through cultural and management practices.			X
<b>Objective B:</b>	Achievement of an orderly agricultural marketing system through product promotion and industry organization.			X
<b>Objective C:</b>	Achievement of increased consumption of and demand for Hawaii's agricultural products through consumer education and product quality.			X
<b>Objective D:</b>	Achievement of optimal contribution by agriculture to the State's economy.			X
<b>Objective E:</b>	Achievement of adequate capital, and knowledge of its proper management, for agricultural development.			X
<b>Objective F:</b>	Achievement of increased agricultural production and growth through pest and disease controls.			X
<b>Objective G:</b>	Achievement of effective protection and improved quality of Hawaii's land, water, and air.	X		
<b>Objective H:</b>	Achievement of productive agricultural use of lands most suitable and needed for agriculture.			X
<b>Objective I:</b>	Achievement of efficient and equitable provision of adequate water for agricultural use.			X
<b>Objective J:</b>	Achievement of maximum degree of public understanding and support of agriculture in Hawaii.			X
<b>Objective K:</b>	Achievement of adequate supply of properly trained labor for agricultural needs.			X
<b>Objective L:</b>	Achievement of adequate transportation services and facilities to meet agricultural needs.			X
<b>Objective M:</b>	Achievement of adequate support services and infrastructure to meet agricultural needs.			X
<b>Discussion:</b> Although the Project Site is designated for agricultural use, it is not suitable for agricultural use and has never been used for agriculture (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ); therefore, most of the objectives are not applicable. The Proposed Action would have no impact on agricultural production in the region.				

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Conservation Lands Functional Plan</b>				
<b>Objective IA:</b>	Establishment of data bases for inventories of existing lands and resources.			X
<b>Objective IB:</b>	Establishment of criteria for management of land and natural resources.			X
<b>Objective IIA:</b>	Establishment of plans for natural resources and land management.			X
<b>Objective IIB:</b>	Protection of fragile or rare natural resources.			X
<b>Objective IIC:</b>	Enhancement of natural resources.			X
<b>Objective IID:</b>	Appropriate development of natural resources.			X
<b>Objective IIE:</b>	Promotion and marketing of appropriate natural resources designated for commercial development.			X
<b>Objective IIF:</b>	Increase enforcement of land and natural resource use laws and regulations.			X
<b>Objective IIIA:</b>	Develop and implement conservation education programs for the general public and visitors.			X
<b>Objective IIIB:</b>	Increase access to land and natural resource data by the public and increase cooperation between agencies by making access to land and natural resource information more efficient.			X
<b>Discussion:</b> The objectives of the Conservation Lands Functional Plan are not applicable as the property is not within the Conservation District.				
<b>Education Functional Plan</b>				
<b>Objective A (1):</b>	Academic Excellence. Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			X
<b>Objective A (2):</b>	Basic Skills. Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning. Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			X
<b>Objective A (3):</b>	Education Workforce. Initiate efforts to improve the quality of education by improving the capabilities of the education workforce.			X
<b>Objective A (4):</b>	Services and Facilities. Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			X



HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective B (1):</b>	Alternatives for Funding and Delivery. Explore alternatives for funding and delivery of educational services to improve the overall quality of education.			X
<b>Objective B (2):</b>	Autonomy and flexibility. Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X
<b>Objective B (3):</b>	Increased Use of Technology. Increase and improve the use information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.			X
<b>Objective B (4):</b>	Personal Development. Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		
<b>Objective B (5):</b>	Students with Special Needs. Provide appropriate educational opportunities for groups with special needs.			X
<b>Objective C (1):</b>	Early Childhood Education. Develop resources and programs for early childhood education.			X
<b>Objective C (2):</b>	Hawaii's Cultural Heritage. Promote educational programs which enhance understanding of Hawaii's cultural heritage.			X
<b>Objective C (3):</b>	Research Programs and [Communication] Activities. Support research programs and activities that enhance the education programs of the State.			X
<p><b>Discussion:</b> PVT is not an educational facility or involved in educational program development; however, under the Proposed Action they would continue their financial support for and participation in personal development activities in the community, including sports teams and clubs for youth. PVT would continue to award financial support for education through the PVT Scholarship Fund. PVT would continue to educate students (and other members of the public) on sustainable waste management practices through tours of the PVT ISWMF. These and other contributions are described in Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i>.</p>				
Employment Functional Plan				
<b>Objective A:</b>	Improve the qualifications of entry-level workers and their transition to employment.			X
<b>Objective B:</b>	Develop and deliver education, training and related services to ensure and maintain a quality and competitive workforce.	X		
<b>Objective C:</b>	Improve labor exchange.			X
<b>Objective D:</b>	Improve the quality of life for workers and families.	X		

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective E:</b>	Improve planning of economic development, employment and training activities.	X		
<p>Discussion: PVT would continue to employ up to 80 personnel at the PVT ISWMF. Most of the employees live in the Waianae Region. PVT improves the quality of life for employees and their families through wages and reducing the commute time for those who live in the region. All employees are provided training in health and safety and emergency response. On-the-job skills training is provided for various operations, such as use and maintenance of heavy equipment. These skills would be applicable to future employment. PVT recognizes the variability in literacy levels and adapts training programs to meet the needs of all employees. These and other details are provided in Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i>.</p>				
Energy Functional Plan				
<b>Objective A:</b>	Moderate the growth in energy demand through conservation and energy efficiency.	X		
<b>Objective B:</b>	Displace oil and fossil fuels through alternate and renewable energy resources.	X		
<b>Objective C:</b>	Promote energy education and legislation.			X
<b>Objective D:</b>	Support and develop an integrated approach to energy development and management.			X
<b>Objective E:</b>	Ensure State's abilities to implement energy emergency actions immediately in event of fuel supply disruptions. Ensure essential public services are maintained and provisions are made to alleviate economic and personal hardships which may arise.			X
<p><b>Discussion:</b> The Proposed Action would continue to use and support renewable energy technologies that reduce Hawaii's reliance on fossil fuels. Feedstock generated from C&amp;D debris is a sustainable, renewable, and local source of energy. The Proposed Action would generate renewable energy to power PVT's facilities. PVT proposes to install a PV system and a gasification unit or anaerobic digestion system. PVT has and will continue to invest in hybrid heavy equipment that consumes less diesel fuel. These and other details are provided in Section 2.5.5, <i>Proposed Renewable Energy Production</i>.</p>				
Health Functional Plan				
<b>Objective 1:</b>	Health promotion and disease prevention. Reduction in the incidence, morbidity and mortality associated with preventable and controllable conditions.			X
<b>Objective 2:</b>	Prevention and control of communicable diseases. Reduction in the incidence, morbidity, and mortality associated with infectious and communicable diseases.			X

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective 3:</b>	Health needs of special populations with impaired access to health care. Increased availability and accessibility of health services for groups with impaired access to health care programs.			X
<b>Objective 4:</b>	Community hospitals system. Development of a community hospital system which is innovative, responsive and supplies high quality care to the constituencies it serves.			X
<b>Objective 5:</b>	Environmental programs to protect and enhance the environment. Continued development of new environmental protection and health services programs to protect, monitor, and enhance the quality of life in Hawaii.			X
<b>Objective 6:</b>	DOH leadership. To improve the Department of Health's ability to meet the public health need of the State of Hawaii in the most appropriate, beneficial and economical way possible.			X
<b>Discussion:</b> The objectives of the Health Functional Plan are not applicable because PVT is not a health program provider; however, the Proposed Action would provide uninterrupted, critical, and responsible C&D debris management services to Oahu, which is a benefit to public health.				
<b>Higher Education Functional Plan</b>				
<b>Objective A:</b>	A number and variety of postsecondary education institutions sufficient to provide the diverse range of programs required to satisfy individual and societal needs and interests.			X
<b>Objective B:</b>	The highest level of quality, commensurate with its mission and objectives, of each educational, research, and public service program offered in Hawaii by an institution of higher education.			X
<b>Objective C:</b>	Provide appropriate educational opportunities for all who are willing and able to benefit from postsecondary education.			X
<b>Objective D:</b>	Provide financing for postsecondary education programs sufficient to ensure adequate diversity, high quality, and wide accessibility.	X		
<b>Objective E:</b>	Increase program effectiveness and efficiency through better coordination of educational resources.			X
<b>Discussion:</b> Most of the objectives are not applicable because PVT does not have education program development responsibility; however, PVT would continue to provide scholarships to college bound high school students and provide class tours of the PVT ISWMF.				
<b>Historic Preservation Functional Plan</b>				
<b>Objective A:</b>	Identification of historic properties.	X		
<b>Objective B:</b>	Protection of historic properties.	X		
<b>Objective C:</b>	Management and treatment of historic properties.	X		
<b>Objective D:</b>	Provision of adequate facilities to preserve historic resources.	X		

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective E:</b>	The establishment of programs to collect and conserve historic records, artifacts, and oral histories and to document and perpetuate traditional arts, skills, and culture.			X
<b>Objective F:</b>	Provision of better access to historic information.			X
<b>Objective G:</b>	Enhancement of skills and knowledge needed to preserve historical resources.			X
<b>Discussion:</b> Section 5.1, <i>Archaeological and Historical Resources</i> and the documents in Appendix G describe the historic resource studies conducted at and in the vicinity of the Project Site, the significant historic resources identified, and the SHPD-approved preservation and protection measures that would be implemented.				
Housing Functional Plan				
<b>Objective A:</b>	Increase and sustain the supply of permanent rental housing that is affordable and accessible to Hawai'i residents, particularly those with incomes at or below 80% AMI. Attain the legislative goal of 22,500 rental housing units by 2026.			X
<b>Objective B:</b>	Increase the homeownership rate.			X
<b>Objective C:</b>	Address barriers to residential development			X
<b>Objective D:</b>	Maintain a statewide housing data system for use by public and private agencies engaged in the provision of housing.			X
<b>Discussion:</b> None of the housing objectives are applicable to the Proposed Action. The Proposed Action would have no direct impact on housing or induce population growth that could affect housing demand.				
Human Services Functional Plan				
<b>Objective A:</b>	To sustain and improve current elder abuse and neglect services.			X
<b>Objective B:</b>	To increase cost-effective, high quality home and community-based services.			X
<b>Objective C:</b>	To increase home-based services to keep children in their homes and to increase placement resources for those children who must be temporarily or permanently removed from their homes, due to abuse or neglect.			X
<b>Objective D:</b>	To address factors that contribute to child abuse and other forms of family violence.			X
<b>Objective E:</b>	To provide affordable, accessible, and quality child care.			X
<b>Objective G:</b>	To provide AFDC recipients with a viable opportunity to become independent of the welfare system.			X
<b>Objective H:</b>	To facilitate client access to human services.			X
<b>Objective I:</b>	To eliminate organizational barriers which limit client access to human services.			X

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Discussion:</b> The human services objectives are not applicable to the Proposed Action.				
<b>Recreation Functional Plan</b>				
<b>Objective I.A:</b>	Address the problem of saturation of the capacity of beach parks and nearshore waters.			X
<b>Objective I.B:</b>	Reduce the incidence of ocean recreation accidents.			X
<b>Objective I.C:</b>	Resolve conflicts between different activities at heavily used ocean recreation areas.			X
<b>Objective I.D:</b>	Provide adequate boating facilities. Balance the demand for boating facilities against the need to protect the marine environment from potential adverse impacts.			X
<b>Objective II.A:</b>	Plan, develop, and promote recreational activities and facilities in mauka and other areas to provide a wide range of alternatives.			X
<b>Objective II.B:</b>	Meet special recreation needs of the elderly, the disabled, women, single-parent families, immigrants, and other groups.			X
<b>Objective II.C:</b>	Improve and expand the provision of recreation facilities in urban areas and local communities.			X
<b>Objective III.A:</b>	Prevent the loss of access to shoreline and upland recreation areas due to new developments.			X
<b>Objective III.B:</b>	Resolve the problem of landowner liability that seriously hampers public access over private lands.			X
<b>Objective III.C:</b>	Increase access to State Forest Reserve lands over federal property, leased State lands, and other government lands.			X
<b>Objective III.D:</b>	Acquire, develop, and manage additional public access ways.			X
<b>Objective IV.A:</b>	Promote a conservation ethic in the use of Hawaii's recreational resources.			X
<b>Objective IV.B:</b>	Prevent degradation of the marine environment.			X
<b>Objective IV.C:</b>	Improve the State's enforcement capabilities.			X
<b>Objective IV.D:</b>	Mitigate adverse impacts of tour helicopters on the quality of recreational experiences in wilderness areas.			X
<b>Objective V.A:</b>	Properly maintain existing parks and recreation areas.			X
<b>Objective V.B:</b>	Promote interagency coordination and cooperation to facilitate sharing of resources, joint development efforts, clarification of responsibilities and jurisdictions, and improvements in enforcement capabilities.			X
<b>Objective V.C:</b>	Assure adequate support for priority outdoor recreation programs and facilities.	X		



HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective VI.A:</b>	Increase recreational access and opportunities in Hawaii's wetlands.			X
<b>Objective VI.B:</b>	Develop an adequate information base to assist the County planning departments and other regulatory agencies in make decisions regarding wetlands.			X
<b>Objective VI.C:</b>	Assure the protection of the most valuable wetlands in the state.			X
<b>Discussion:</b> The Proposed Action is not a recreational use and would be on private land; therefore, the objectives are not applicable. However, PVT would continue to provide financial support to recreational activities in the community.				
Tourism Functional Plan				
<b>Objective I.A:</b>	Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.			X
<b>Objective II.A:</b>	Development and maintenance of well-designed visitor facilities and related developments which are sensitive to the environment, sensitive to neighboring communities and activities, and adequately serviced by infrastructure and support services.			X
<b>Objective III.A:</b>	Enhancement of respect and regard for the fragile resources which comprise Hawaii's natural and cultural environment. Increased preservation and maintenance efforts.			X
<b>Objective IV.A:</b>	Support of Hawaii's diverse range of lifestyles and natural environment.			X
<b>Objective IV.B:</b>	Achievement of mutual appreciation among residents, visitors, and the visitor industry.			X
<b>Objective V.A:</b>	Development of a productive workforce to maintain a high-quality visitor industry.			X
<b>Objective V.B:</b>	Enhancement of career and employment opportunities in the visitor industry.			X
<b>Objective VI.A:</b>	Maintenance of a high customer awareness of Hawaii as a visitor destination in specific desired market segments.			X
<b>Discussion:</b> The objectives of the Tourism Functional Plan are not applicable to the Proposed Action.				
Transportation Functional Plan				
<b>Objective I.A:</b>	Expansion of the transportation system.			X
<b>Objective I.B:</b>	Reduction of travel demand through zoning and decentralization.			X
<b>Objective I.C:</b>	Management of existing transportation systems through a program of transportation systems management (TSM).			X

HAWAII STATE FUNCTIONAL PLANS		Is Proposed Action Consistent?		
		Yes	No	N/A
<b>Objective I.D:</b>	Identification and reservation of lands and rights-of-way required for future transportation improvements.			X
<b>Objective I.E:</b>	Planning and designing State highways to enhance inter-regional mobility.			X
<b>Objective I.F:</b>	Improving and enhancing transportation safety.			X
<b>Objective I.G:</b>	Improved transportation maintenance programs.			X
<b>Objective I.H:</b>	Ensure that transportation facilities are accessible to people with disabilities.			X
<b>Objective II.A:</b>	Development of a transportation infrastructure that supports economic development initiatives.			X
<b>Objective III.B:</b>	Expansion of revenue bases for transportation improvements.			X
<b>Objective IV.A:</b>	Providing educational programs.			X
<b>Discussion:</b> The transportation objectives are not applicable to the Proposed Action because PVT does not plan or program transportation services.				
Water Resources Development Functional Plan				
<b>Objective A:</b>	Enunciate State water policy and improve management framework.			X
<b>Objective B:</b>	Maintain the long-term availability of freshwater supplies, giving consideration to the accommodation of important environmental values.			X
<b>Objective C:</b>	Improve management of floodplains.			X
<b>Objective D:</b>	Assure adequate municipal water supplies for planned urban growth.			X
<b>Objective E:</b>	Assure the availability of adequate water for agriculture.			X
<b>Objective F:</b>	Encourage and coordinate with other water programs the development of self-supplied industrial water and the production of water-based energy.			X
<b>Objective G:</b>	Provide for the protection and enhancement of Hawaii's freshwater and estuarine environment.	X		
<b>Objective H:</b>	Improve State grant and loan procedures for water program and projects.			X
<b>Objective I:</b>	Pursue water resources data collection and research to meet changing needs.			X
<b>Discussion:</b> The water resources development objectives are not applicable to the Proposed Action because PVT is not responsible for water resources programs. As discussed in Section 3.4, <i>Water Resources</i> , the Proposed Action would have no adverse impact on potable water quality or supply. The aquifer beneath the Project Site is not a potable water supply. PVT would continue to use non-potable water				

HAWAII STATE FUNCTIONAL PLANS	Is Proposed Action Consistent?		
	Yes	No	N/A
drawn from wells onsite to the extent practical; thereby, minimizing the demand on BWS water supply. The Proposed Action would be designed and managed to protect the environment including water resources.			

## 6.3 County Plans, Policies, and Controls

This section discusses conformance of the Proposed Action with CCH plans, policies, and controls.

### 6.3.1 Oahu General Plan

The *Oahu General Plan* is a statement of objectives and policies that is the foundation for the CCH planning process. The *General Plan* serves a dual purpose. First, it is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Oahu. These objectives contain both statements of desirable conditions to be sought over the long term and statements of desirable conditions which can be achieved within an approximate twenty-year time horizon. Second, the *General Plan* is a statement of broad policies which facilitate the attainment of the objectives of the plan.

The discussion of the Proposed Action's consistency with the General Plan is limited to those objectives and policies that are applicable. Those objectives that are not applicable are noted but the policies that are not applicable are not listed for discussion.

**Table 6-10 Consistency with Oahu General Plan**

OAHA GENERAL PLAN OBJECTIVES AND POLICIES	Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)	Yes	No	N/A
<b>I. Population</b>			
<b>Objective A:</b> To control the growth of Oahu's resident and visitor populations in order to avoid social, economic, and environmental disruptions.			X
<b>Objective B:</b> To plan for future population growth.			X
<b>Objective C:</b> To establish a pattern of population distribution that will allow the people of Oahu to live and work in harmony.			X
<b>Discussion:</b> Not Applicable. The Proposed Action would not affect population growth (permanent or visitor) or induce population growth (Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> ).			
<b>II. Economic Activity</b>			
<b>Objective A:</b> To promote employment opportunities that will enable all the people of Oahu to attain a decent standard of living.	X		

OAHU GENERAL PLAN OBJECTIVES AND POLICIES	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Amended October 3, 2002 (Resolution 02-205, CD1)</b>			
<b>Policy 1:</b> Encourage the growth and diversification of Oahu's economic base.	X		
<b>Policy 2:</b> Encourage the development of small businesses and larger industries which will contribute to the economic and social well-being of Oahu residents.	X		
<b>Policy 3:</b> Encourage the development in appropriate locations on Oahu of trade, communications, and other industries of a nonpolluting nature.	X		
<b>Policy 4:</b> Encourage the development of local, national, and world markets for the products of Oahu-based industries.			X
<b>Policy 5:</b> Encourage the wider distribution of available employment opportunities through such methods as shortening the work week and reducing the use of overtime.			X
<b>Policy 6:</b> Encourage the continuation of a significant level of Federal employment on Oahu.			X
<b>Objective B:</b> To maintain the viability of Oahu's visitor industry.			X
<b>Objective C:</b> To maintain the viability of agriculture on Oahu.			X
<b>Policy 1:</b> Assist the agricultural industry to ensure the continuation of agriculture as an important source of income and employment.			X
<b>Policy 2:</b> Support agricultural diversification in all agricultural areas on Oahu.			X
<b>Policy 3:</b> Support the development of markets for local products, particularly those with the potential for economic growth.			X
<b>Policy 4:</b> Provide sufficient agricultural land in Ewa, Central Oahu, and the North Shore to encourage the continuation of sugar and pineapple as viable industries.			X
<b>Policy 5:</b> Maintain agricultural land along the Windward, North Shore, and Waianae coasts for truck farming, flower growing, aquaculture, livestock production, and other types of diversified agriculture.			X
<b>Policy 6:</b> Encourage the more intensive use of productive agricultural land.			X
<b>Policy 7:</b> Encourage the use of more efficient production practices by agriculture, including the efficient use of water.			X
<b>Policy 8:</b> Encourage the more efficient use of non- potable water for agricultural use.			X
<b>Objective D:</b> To make full use of the economic resources of the sea.			X
<b>Objective E:</b> To prevent the occurrence of large-scale unemployment.			X
<b>Objective F:</b> To increase the amount of Federal spending on Oahu.			X
<b>Objective G:</b> To bring about orderly economic growth on Oahu.			X
<b>Discussion:</b> PVT operations have and would continue to have direct, indirect and induced beneficial economic impacts in the State and County. The Proposed Action provides employment opportunities at competitive wages. Most of PVT's employees are from the Waianae Region. PVT provides a critical public service that has a financial multiplier effect on the economy and supports the construction industry. The job			

OAHU GENERAL PLAN OBJECTIVES AND POLICIES	Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)	Yes	No	N/A
<p>multiplier is 2.38 (i.e., for every job retained, 1.38 additional jobs in the island economy would be supported) while the wage multiplier is 2.02 (i.e., for every \$1 earned directly, by PVT staff, others in the economy earn an additional \$1.02) (DBEDT 2016).</p> <p>The Project Site is not suitable for agriculture and has never been used for agricultural production, as described in Section 6.2.2.6, <i>Criterion 6 The Project Site is Unsuitable for Permissible Uses</i> and Section 6.2.2.7, <i>Agricultural Productivity Ratings</i>. The Proposed Action would have no impact on agricultural production in the region. The proposed operations would rely on non-potable water resources to the extent possible to minimize impacts on potable water quantity and BWS services.</p>			
III. Natural Environment			
<b>Objective A:</b> To protect and preserve the natural environment.	X		
<b>Policy 1:</b> Protect Oahu's natural environment, especially the shoreline, valleys, and ridges, from incompatible development.	X		
<b>Policy 2:</b> Seek the restoration of environmentally damaged areas and natural resources.			X
<b>Policy 3:</b> Retain the Island's streams as scenic, aquatic, and recreation resources.			X
<b>Policy 4:</b> Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water- recharge areas, distinctive land forms, and existing vegetation.	X		
<b>Policy 5:</b> Require sufficient setbacks of improvements in unstable shoreline areas to avoid the future need for protective structures.			X
<b>Policy 6:</b> Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.	X		
<b>Policy 7:</b> Protect the natural environment from damaging levels of air, water, and noise pollution.	X		
<b>Policy 8:</b> Protect plants, birds, and other animals that are unique to the State of Hawaii and the Island of Oahu.			X
<b>Policy 9:</b> Protect mature trees on public and private lands and encourage their integration into new developments.			X
<b>Policy 10:</b> Increase public awareness and appreciation of Oahu's land, air, and water resources.			X
<b>Policy 11:</b> Encourage the State and Federal governments to protect the unique environmental, marine, and wildlife assets of the Northwestern Hawaiian Islands.			X
<b>Objective B:</b> To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.	X		
<b>Policy 1:</b> Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reefs and offshore islands.	X		



OAHU GENERAL PLAN OBJECTIVES AND POLICIES		Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)		Yes	No	N/A
<b>Policy 2:</b> Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas.		X		
<b>Policy 3:</b> Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.		X		
<b>Policy 4:</b> Provide opportunities for recreational and educational use and physical contact with Oahu's natural environment.				X
<b>Discussion:</b> The Proposed Action would not adversely impact natural resources and is compatible with the existing physical conditions (Section 3, <i>Natural Resources</i> ). The Proposed Action would meet applicable regulations related to surface water, groundwater, and air quality. The physical attributes of the Project Site were accommodated in the site design and development plan. The risk associated with natural hazards would not increase with the Proposed Action.				
IV. Housing				
<b>Objective A:</b> To provide decent housing for all the people of Oahu at prices they can afford.				X
<b>Objective B:</b> To reduce speculation in land and housing.				X
V. Transportation and Utilities				
<b>Objective A:</b> To create a transportation system which will enable people and goods to move safely, efficiently, and at a reasonable cost; serve all people, including the poor, the elderly, and the physically handicapped; and offer a variety of attractive and convenient modes of travel.				X
<b>Objective B:</b> To meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal.		X		
<b>Policy 1:</b> Develop and maintain an adequate supply of water for both residents and visitors.				X
<b>Policy 2:</b> Develop and maintain an adequate supply of water for agricultural and industrial needs.				X
<b>Policy 3:</b> Encourage the development of new technology which will reduce the cost of providing water and the cost of waste disposal.		X		
<b>Policy 4:</b> Encourage a lowering of the per-capita consumption of water and the per-capita production of waste.		X		
<b>Policy 5:</b> Provide safe, efficient, and environmentally sensitive waste-collection and waste-disposal services.		X		
<b>Policy 6:</b> Support programs to recover resources from solid-waste and recycle wastewater.		X		
<b>Policy 7:</b> Require the safe disposal of hazardous waste.				X
<b>Objective C:</b> To maintain a high level of service for all utilities.				X

OAHU GENERAL PLAN OBJECTIVES AND POLICIES	Is Proposed Action Consistent?		
	Yes	No	N/A
<b>Amended October 3, 2002 (Resolution 02-205, CD1)</b>			
<b>Objective D:</b> To maintain transportation and utility systems which will help Oahu continue to be a desirable place to live and visit.			X
<b>Discussion:</b> Section 2.2, <i>Purpose and Need for the Proposed Action</i> , is consistent with the objective of providing Oahu an environmentally sound system of C&D debris management. PVT has proven they are environmentally responsible waste facility managers. In addition to the environmental protection and monitoring systems that would be implemented to protect the environment, the Proposed Action would actively divert 80% of the recyclable materials from the landfill through innovative sorting and recovery technologies. PVT minimizes their consumption of BWS potable water through the use of non-potable water to the extent practicable. PVT does not accept hazardous waste.			
<b>VI. Energy</b>			
<b>Objective A:</b> To maintain an adequate, dependable, and economical supply of energy for Oahu residents.			X
<b>Objective B:</b> To conserve energy through the more efficient management of its use.	X		
<b>Policy 1:</b> Ensure that the efficient use of energy is a primary factor in the preparation and administration of land use plans and regulations.			X
<b>Policy 2:</b> Provide incentives and, where appropriate, mandatory controls to achieve energy-efficient siting and design of new developments.			X
<b>Policy 3:</b> Carry out public, and promote private, programs to more efficiently use energy in existing buildings and outdoor facilities.			X
<b>Policy 4:</b> Promote the development of an energy-efficient transportation system.			X
<b>Objective C:</b> To fully utilize proven alternative sources of energy.	X		
<b>Policy 1:</b> Encourage the use of commercially available solar energy systems in public facilities, institutions, residences, and business developments.	X		
<b>Policy 2:</b> Support the increased use of operational solid waste energy recovery and other biomass energy conversion systems.	X		
<b>Objective D:</b> To develop and apply new, locally available energy resources.	X		
<b>Policy 1:</b> Support and participate in research, development, demonstration, and commercialization programs aimed at producing new, economical, and environmentally sound energy supplies from: a. solar insolation; b. biomass energy conversion; c. wind energy conversion; d. geothermal energy; and e. ocean thermal energy conversion.	X		
<b>Policy 2:</b> Secure State and Federal support of City and County efforts to develop new sources of energy.			X
<b>Objective E:</b> To establish a continuing energy information program.			X

OAHU GENERAL PLAN OBJECTIVES AND POLICIES	Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)	Yes	No	N/A
<p><b>Discussion:</b> The Proposed Action would continue to use and support renewable energy technologies that reduce Hawaii's reliance on fossil fuels. Feedstock generated from C&amp;D debris is a sustainable, renewable, and local source of energy. PVT is in negotiation with local energy providers to use the feedstock to generate electricity for Oahu. The Proposed Action would generate renewable energy to power PVT's facilities. PVT proposes to install a PV system and a gasification unit or anaerobic digestion system. Renewable energy installations would meet applicable State and CCH regulations and PVT would obtain additional permits, as necessary. PVT has and will continue to invest in hybrid heavy equipment that consumes less diesel fuel. These and other details are provided in Section 2.5.5, <i>Proposed Renewable Energy Production</i>.</p>			
VII. Physical Development and Urban Design			
<b>Objective A:</b> To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.			X
<b>Objective B:</b> To develop Honolulu (Waialae-Kahala to Halawa), Aiea, and Pearl City as the Island's primary urban center.			X
<b>Objective C:</b> To develop a secondary urban center in Ewa with its nucleus in the Kapolei area.			X
<b>Objective D:</b> To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live.			X
<b>Objective E:</b> To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.			X
<b>Objective F:</b> To promote and enhance the social and physical character of Oahu's older towns and neighborhoods.			X
<b>Discussion:</b> These objectives are not applicable because the Proposed Action is not an Urban development.			
VIII. Public Safety			
<b>Objective A:</b> To prevent and control crime and maintain public order.	X		
<b>Objective B:</b> To protect the people of Oahu and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.	X		
<p><b>Discussion:</b> The Proposed Action would provide a critical public health service that discourages illegal dumping and provides responsible debris management to maintain natural resources. The Proposed Action is appropriately sited inland from the coastline and outside of the projected storm wave, tsunami, stream flood/500-year floodplain, and sea level rise hazard zones (Section 3.3, <i>Natural Hazards</i>). The Proposed Action is designed to comply with development standards regarding seismicity, slope stability, erosion control, flooding, and hurricane winds. In the event of natural or man-induced disaster, the PVT ISWMF emergency management plan would be implemented to minimize the threat to life and property.</p>			

OAHU GENERAL PLAN OBJECTIVES AND POLICIES		Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)		Yes	No	N/A
<p>Under the Proposed Action, PVT would also continue to have a critical public safety role during post-disaster recovery. The first step in recovery is debris removal and management. The CCH Disaster Debris Management Plan (2001) and the Makani Pahili 2019 Honolulu Debris Management Workshop describe PVT's role in managing C&amp;D disaster debris. A Category 4 Hurricane that directly hits Oahu is considered the worst-case probable disaster planning scenario. Under this scenario, the workshop attendees determined PVT would receive 2/3 of the anticipated 4 million cubic yards of all C&amp;D debris generated on Oahu, which is comparable to filling Yankee Stadium five times. PVT would receive the debris, bury it, and recover it later for recycling. With the two proposed MRD units, PVT would be able to process the debris efficiently and continue to generate feedstock for renewable energy production while maximizing the amount of debris that is ultimately diverted from the landfill. The CCH has also identified PVT managed land as a favorable staging area for general relief efforts (e.g., storage for food, equipment, tents and other supplies) because the Proposed Action includes the capability to generate water and renewable energy onsite. Clearing roads and providing access to PVT operations, hospitals, utility plants and other critical facilities would be a priority in post-disaster recovery. The communities along the critical routes (including the route to PVT) would also benefit from the cleared roadways for mobility and restoration of community services.</p>				
IX. Health and Education				
<b>Objective A:</b> To protect the health of the people of Oahu.		X		
<b>Objective B:</b> To provide a wide range of educational opportunities for the people of Oahu.				X
<b>Objective C:</b> To make Honolulu the center of higher education in the Pacific.				X
<p><b>Discussion:</b> The health and education objectives are not directly applicable, because PVT is not a health or education program provider. However, the Proposed Action would provide uninterrupted, critical, and responsible C&amp;D debris management services to Oahu, which is a benefit to public health. The Proposed Action would meet applicable regulations related to surface water, ground water, and air quality (Section 3, <i>Natural Environment</i>). PVT would also continue to provide scholarships to college bound high school students and provide class tours of the PVT ISWMF.</p>				
X. Culture and Recreation				
<b>Objective A:</b> To foster the multiethnic culture of Hawaii.				X
<b>Objective B:</b> To protect Oahu's cultural, historic, architectural, and archaeological resources.		X		
<b>Objective C:</b> To foster the visual and performing arts.				X
<b>Objective D:</b> To provide a wide range of recreational facilities and services that are readily available to all residents of Oahu.				X
<p><b>Discussion:</b> The Proposed Action would have no impact on traditional cultural properties or practices or recreational resources and a beneficial impact on archaeological and historic properties. PVT conducted archaeological and cultural impact studies of the Project Site and vicinity to identify potential resources that could be affected by the Proposed Action (Section 5.1, <i>Archaeological and Historical Resources</i>; Section</p>				

OAHU GENERAL PLAN OBJECTIVES AND POLICIES		Is Proposed Action Consistent?		
Amended October 3, 2002 (Resolution 02-205, CD1)		Yes	No	N/A
5.2, <i>Cultural Resources</i> ; Appendices G and H). No traditional cultural practices were identified, and the three historic sites identified would not be within the development area. Although inadvertent disturbance during construction is unlikely, a <i>Preservation Plan</i> for one of the historic sites was developed by CSH and accepted by SHPD to provide long-term protection of the historic site. It will be implemented as part of the Proposed Action (Section 5.1, <i>Archaeological and Historical Resources</i> and Appendix G).				
XI. Government Operations and Fiscal Management				
<b>Objective A:</b> To promote increased efficiency, effectiveness, and responsiveness in the provision of government services by the City and County of Honolulu.		x		
<b>Objective B:</b> To ensure fiscal integrity, responsibility, and efficiency by the City and County government in carrying out its responsibilities.				x
<b>Discussion:</b> The CCH relies on the PVT ISWMF to provide C&D debris management services for Oahu. PVT provides these services at no cost to taxpayers or government agencies. The Proposed Action would continue to provide revenue to State and CCH government through GET, property taxes, and the solid waste surcharge. Without the Proposed Action, the burden to design, construct, and operate a C&D waste management facility would fall on the CCH and State waste management agencies (Section 4.2, <i>Solid Waste and Litter</i> and Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> ).				

### 6.3.2 CCH Land Use Ordinance

The CCH LUO regulates land use in accordance with adopted land use policies, including the *General Plan* and Development (Sustainable Communities) Plans. Permitted land uses and activities are prescribed under Ch. 21, LUO of the CCH ROH, as amended (CCH 1990). The LUO provide development and design standards for the location, height, bulk, and size of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences or other purposes. The provisions are also referred to as the “zoning ordinance.” Below is a discussion of the Proposed Action’s compliance with the LUO.

#### 6.3.2.1 LUO Article 3, Establishment of Zoning Districts and Zoning District Regulations

The zoning designation for the Project Site is the AG-2 General Agricultural District (Figure 6-2). The purpose of the AG-2 district is to conserve and protect agricultural activities on smaller parcels of land. Lands typically included in the AG-2 district are lands in State-designated Agricultural or Urban districts. The permitted uses within the AG-2 zoning district include: aquaculture, crop production, forestry, open land, game preserves, livestock grazing, minor livestock production, and livestock veterinary services.



The Proposed Action includes a "waste disposal and processing" facility, which encompasses facilities utilized for the disposal and processing of solid waste, including refuse dumps, sanitary landfills, incinerators, and resource recovery plants. A "biofuel" processing facility is also proposed. According to the LUO Table 21-3 Master Use Table, these facilities are conditional uses in AG-2 zones, subject to a Conditional Use Permit Major (CUP-Major) and standards in Article 5 of the LUO (Specific Use Development Standards).

The Proposed Action meets the conditional use criteria. Briefly, the general criteria (LUO §21-2.90-2) are met as follows:

1. *The proposed use is permitted as a conditional use in the underlying zoning district and conforms to the requirements of [the LUO].*

As described above, the Proposed Action includes a waste disposal and processing facility and a biofuel processing facility which are conditionally permitted use in AG-2.

2. *The site is suitable for the proposed use considering size, shape, location, topography, infrastructure and natural features.*

The Project Site location would provide maximum operational efficiency because it is adjacent to the existing PVT ISWMF, which is undergoing closure activities. Access is available from Lualualei Naval Road and approved by the U.S. Navy.

The size is adequate for the Proposed Action. The shape of the parcel is oblong oriented north-south with the long edge aligned along Lualualei Naval Road (across from PVT ISWMF) and the shorter southern boundary shared with Country- or Residential-zoned parcels.

The non-potable water infrastructure on the Project Site is available for use. Potable water and electrical service is accessible. Wastewater would be managed onsite.

There would be no impact on the adjacent Puu Heleakala landform. Grading at the Project Site will be required. No distinctive topographic features are present on the Project Site.

3. *The proposed use will not alter the character of the surrounding area in a manner substantially limiting, impairing or precluding the use of surrounding properties for the principal uses permitted in the underlying zoning district.*

The Proposed Action would have no impact on existing or planned land uses in their underlying zoning districts. The proposed waste management facilities are located at a distance from the adjacent residential and country zoned areas south of the Project Site. The Proposed Action's design, and adherence to the Operations Plan and permit conditions, as described in this EIS, mitigate potential adverse impacts on the existing or future residential communities.

The views into the Project Site would be limited by topography, landscaping, and fencing. The Lualualei Naval Access Road is not a public thoroughfare and the traffic is generally limited to military and truck traffic, further limiting the impact on the general public.

The other adjacent parcels are zoned for preservation (east/north), agriculture (north/west) or industrial uses (northwest) and would be unaffected by the Proposed Action. The Proposed Action would not limit, impair or preclude the permissible use of surrounding properties.

4. *The use at its proposed location will provide a service or facility which will contribute to the general welfare of the community-at-large or surrounding neighborhood.*

The Proposed Action is critical to the CCH Integrated Solid Waste Management Plan as the only commercially available C&D landfill on Oahu for the foreseeable future. The intent has been to relocate operations to the Project Site when the PVT ISWMF is closed. Historically, the two sites were assessed as one candidate landfill site. There is no intention to increase the number of truck trips, or increase the volume of waste managed. Once relocation is complete, the existing PVT ISWMF will be closed and will no longer accept materials.

The Proposed Action is a preferred alternative to illegal dumping.

PVT would continue to contribute to the general community-at-large by supporting government sustainability goals, providing revenue to the State and CCH, and providing jobs and training to Waianae Region residents. PVT would continue to be a good neighbor and respond quickly to community concerns related to their operations inside the property or the actions of the haulers *en route* to the property. PVT would continue to provide support for community organizations and fund college scholarships.

The Proposed Action meets the AG-2 Development Standards (LUO Section 3, Table 21-3.1), as summarized in Table 6-11.

**Table 6-11 Agricultural Development Standards**

Development Standard		AG-2 District	Proposed Action
Minimum Lot Area		2 acres	179 acres
Minimum Lot Width/Depth		150 feet	1,230 feet
Yards (minimum distance):	Front (South & West)	15 feet	170 feet (South to stormwater basin) 26 feet (West to landfill access road)
	Side/Rear (North & East)	10 feet	26 feet (East and North to landfill access road)
Maximum Building Area		10%	0.2%
Maximum Height		25 feet (if height setbacks are provided)	25 feet
Height Setbacks		Any portion of a structure exceeding 15 feet must be set back from every front, side, and rear buildable area boundary line one foot for each two feet of additional height above 15 feet.	Complies. All structures will exceed the exceeding 15 feet must be set front, side, and rear yard setbacks by from every front, side, and more than 10 feet.

Source: ROH § 21-3.50-4(c).

### **6.3.2.2 LUO Article 4, General Development Standards**

The LUO Article 4 includes standards relating to land development which are generally applicable to any use or site, irrespective of the zoning district in which it is located.

Sec. 21-4.20 Flag Lot. The Project Site is not a flag lot.

Sec. 21-4.30 Yards and street setbacks. No structures are proposed within the yards and street setbacks (See Section 21-Article 5 discussion), except utility poles, fences, landscaping, and public utility equipment (Figure 2-3).

Sec. 21-4.40 Retaining walls. No retaining walls are proposed in the yard or street setback.

Sec. 21-4.60 Heights. The proposed structures meet the specific zoning height restrictions (See Section 21-Article 5 discussion). Height exemptions for utility poles, energy savings devices, rooftop equipment, flood control structures and others listed, would not be required.

Sec. 21-4.70 Landscaping and screening. A Landscaping Plan for the Proposed Action has been developed and complies with applicable landscaping and shading requirements. Two 40-stall parking areas are proposed: (1) near the office trailers in the southeastern portion of the Project Site and (2) near the MRD Area. Neither are adjacent to any adjoining street right-of-way. Shading is required for parking lots of greater than 10 parking stalls.

All service areas and loading spaces would be screened from the adjoining lots zoned country and residential on the southern boundary by a 15-foot dust screen. A 100-foot landscaping strip along the southern boundary would screen views into the Project Site (Figure 2-3).

A permanent irrigation system will be installed for all plantings and landscaping.

No outdoor trash storage areas or rooftop equipment that would require additional screening is proposed.

Sec. 21-4.80 Noise regulations. No public address system or other noise amplifying systems are proposed.

Sec. 21-4.90 Sunlight reflection regulations. None of the buildings would contain a reflective surface. However, PV panels would be installed on the ground surface in a manner that avoids glint and glare impacts.

Sec. 21-4.100 Outdoor lighting. Night lighting will be minimal and would be shielded with full cut-off fixtures to eliminate direct illumination to the adjacent country and residential zoned parcels.

### **6.3.2.3 LUO Article 5, Specific Use Development Standards**

Sec. 21-5.680 Waste disposal and processing and Sec. 21-5.80A Biofuel processing facilities.

The setbacks from waste disposal and processing facilities are defined as follows: “No waste disposal and processing facility shall be located within 1,500 feet of any zoning lot in a country, residential, apartment, apartment mixed use or resort district. When it can be determined that potential impacts will be adequately mitigated due to prevailing winds, terrain, technology or similar considerations, this distance may be reduced, provided that at no time shall the distance be less than 500 feet.” (Sec. 21-5.680 Added by Ord. 99-12)

Residential- and country-zoned parcels are located adjacent and south of the Project Site. Most of the adjacent area is currently vacant but there are residences to the southeast and southwest.

As described in Section 2.5.2, *Site Development Plan* and shown on Figure 2-3, there would be a 750-foot buffer between the material disposal and processing facilities and the southern boundary of the Project Site. This buffer complies with Sec. 21-5.680 Added by Ord. 99-12 because:

- Potential impacts would be adequately mitigated based on winds, terrain, technology, and operational best management practices.
- Support structures and operations (such as the entrance and scalehouse) are allowed within the setback area as they do not constitute a “waste disposal and processing facility.”

*Potential impacts will be adequately mitigated:*

Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the *Operations Plan* and site design, as described in Section 2.5, *Description of the Proposed Action*. The measures have been proven to be effective at the PVT ISWMF.

Section 3.5, *Air Quality*, PVT has commissioned nine air quality and human health risk assessments for the PVT ISWMF over the last 15 years. Two of these reports are described in further detail below. In sum, the reports conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that there is no evidence that the dust generated by PVT poses a health risk. PVT would continue to implement dust control measures at the Project Site to minimize the generation and dispersal of fugitive dust as described in Section 2.5.7.2, *Dust Control*. Odor is not an issue with the Proposed Action due to the inert nature of C&D debris. No impacts to air quality are anticipated.

When PVT first proposed mining of the Phase I landfill cells at its current ISWMF, HDOH was concerned that mining in the cells closest to the residences could adversely affect air quality. Phase I is the area of the current ISWMF that begins at 750 feet from the PVT boundary. DOH required PVT to conduct an air monitoring study at the PVT fenceline using EPA methods both before mining (to establish a baseline) and during mining (to determine if there was any adverse impact). The air monitoring study concluded that the air quality at the PVT fenceline was the same

as regional air quality elsewhere on Oahu (and attaining EPA and state standards) both before and during the mining in Phase I.

Fugitive dust impacts of future landfill operations at the Project Site were evaluated by Jim Morrow in a 2019 *Air Quality Impact Report completed for the PVT Integrated Solid Waste Management Facility Relocation Project* (Appendix B). Morrow used the U.S. EPA-recommended computer model, AERMOD, to evaluate emissions from landfill operations at changing elevation and assumed a 750-foot buffer zone. The results of the modeling analysis are summarized in (Table 3-19) and indicate compliance with federal and state ambient air quality standards. Morrow concluded “PVT’s proposed relocation of operations will not have a significant impact on existing air quality.”

With respect to noise, the *Environmental Noise Assessment Report* (Appendix D) was prepared by D.L. Adams for the Proposed Action. The study considers all sources of noise, including traffic, based on the design of the Proposed Action, which includes the 750-foot buffer area. The sound propagation models were created with a conservative approach that assumed worst case scenarios, in which all sources of noise operating simultaneously and continuously through the operational time period. The noise study concludes that noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or “just barely perceptible”).

Section 4.1, *Transportation* discusses potential impacts of the Proposed Action on traffic. The Proposed Action would not increase traffic to the Project Site, which is limited by their SWMP at 300 haul trucks per day. An independent consultant prepared a *Traffic Impact Analysis Report* (Appendix F) for the Proposed Action. The report concludes that the Proposed Action is expected to increase the traffic at the intersection of Farrington Highway and Lualualei Naval Road by about 1.0% and 0.8%, during the AM and PM peak hours of traffic, respectively. According to professional traffic engineering standards, this is a less than significant adverse impact on roadway traffic.

Section 4.2, *Solid Waste and Litter* addresses potential impacts of the Proposed Action on wind-blown litter. Unlike MSW, the PVT ISWMF waste is heavy and unlikely to be a litter nuisance. PVT implements a litter control program that includes inspections, a litter control fence, and daily cover, as described in Section 2.5.7.1, *Litter Control*. Additional procedures are implemented in the event of a pending wind storm. No impacts related to litter are anticipated.

Although the mitigation would satisfy the minimum setback of 500 feet (Sec. 21-5.680 Added by Ord. 99-12), the Proposed Action was designed to comply with the setback provisions of the PVT SWMP, which states that C&D disposal shall not occur within a buffer area of 750 ft. from the makai property line.



*Allowable operations within the setback:*

The land use ordinance does not define waste disposal and processing facility or the operations that are allowed within the setback zone. Therefore, we rely on HDOH's definitions of disposal and processing.

The Proposed Action has only support structures (such as the entrance and scalehouse) within the first 750 feet. There are no waste disposal or processing activities within the Proposed Action's buffer area. Under the solid waste rules, "disposal" is defined as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste onto any land or water so that the solid waste, or any constituent thereof, may enter the environment, be emitted into the air, or discharged into any water, including ground waters" (HAR § 11-58.1-03). Such activities take place in the landfill cells. Further, "processing" is defined as "an operation to convert solid waste into a useful product or to prepare it for disposal" (HAR § 11-58.1-03). Such activities do not take place in the entrance and scalehouse area of the facility.

Similar setbacks are required for biofuel processing facilities (Sec. 21-5.80A).

"No biofuel processing facility shall be located within 1,500 feet of any zoning lot in a country, residential, apartment, apartment mixed use, or resort district. When it can be determined that potential impacts will be adequately mitigated due to prevailing winds, terrain, technology or similar considerations, this distance may be reduced, provided that at no time shall the distance be less than 500 feet. (Added by Ord. 10-19)."

The biofuel facilities would be located in the northern area of the Project Site beyond the 1,500-foot buffer distance (Figure 2-3).

#### **6.3.2.4 LUO Article 6, Off Street Loading and Parking**

The floor area is defined as the area of all floors of a structure excluding unroofed areas (LUO Article 10. Definitions). "Structure" means anything above existing grade constructed or erected with a fixed location on the ground, or requiring a fixed location on the ground, or attached to something having or requiring a fixed location on the ground. The term "structure" includes the term "building" defined as a structure with a roof which provides shelter for humans, animals or property of any kind (LUO Article 10. Definitions).

Waste disposal and processing facilities require a minimum of 1 parking stall per 1,500 square feet of floor area (Sec. 21-6.20, Table 21-6.1). All proposed structures are 1 story and shown on Figure 2-3. The total proposed floor area is approximately 15,510 square feet and 10 parking spaces would be required. The approximate 80 stalls proposed, far exceeds the minimum parking requirement. All parking and loading areas would be onsite, within designated areas. There is adequate parking provided for employees and visitors. The parking stalls would meet the minimum standard of 18 feet in length and 8 feet 3 inches in width.

The truck traffic is transient and is restricted to specific areas for off-loading waste.

## **6.4 Community-Specific Plans, Policies, and Controls**

This section discusses the Proposed Action's consistency with community-specific and regional plans that are funded by various State and County agencies.

### **6.4.1 Waianae Sustainable Communities Plan**

#### **6.4.1.1 WSCP Project Site Designation**

The Project Site is within the WSCP (DPP 2012) study area that extends between Kahe Power Plant and Kaena Point on the coast, and inland to the Waianae Mountains (Ch. 24, Article 9 ROH) (DPP 2012). The intent of the WSCP is to present the community's vision to guide public and private development in a manner that is consistent with the *Oahu General Plan*. The provisions of the WSCP are not regulatory; however, all proposed development projects within the WSCP study area are evaluated for consistency with and support of the community vision, as described in the WSCP.

#### **6.4.1.2 WSCP Policies and Objectives**

The WSCP policies are organized by Land Use, Open Space, and Public Facilities. The Project Site is designated for agricultural land use in the WSCP Land Use Map, Open Space Map, and Public Facilities Map (Figure 6-3).

"Land uses within the Agriculture area shall be limited to agriculture and other uses that are compatible with a rural landscape and country lifestyle...other potentially appropriate uses include recreational use" (WSCP Section 3.6.2.3).

Agricultural activity is described as being "on the decline," due to the costs of land, transportation, feed and fertilizers (WSCP Section 3.6.1). The Project Site is not suitable for agriculture due to non-productive soils, the climate (i.e., high temperatures and low rainfall), the poor quality of the groundwater, the lack of access to other water resources and the sloped topography, as described in Section 6.2.2.7, *Agricultural Productivity Ratings*.

The Proposed Action is consistent with a rural landscape. No permanent or multistory buildings are proposed. The operations would be generally shielded from public view by topography, landscaping, fencing, and berms covered in vegetation. There are few places in the greater community that currently have unobstructed views to the Project Site, due to the built environment, vegetation and topography. There are no parks, schools or gathering places, shown in Figure 6-3, with views to the Project Site.

In the long-term, when the Project Site reaches permitted capacity and is closed, the open space character of the Project Site would be restored. Operational facilities, equipment and office trailers would be removed. Beneficial reuse of the Project Site could include recreational use. The reuse development potential would be limited to structures with shallow footing (one story). Therefore, rural open space character will be preserved for future generations.

The WSCP states that the LUO “should govern the determination of compatible and incompatible uses” (WSCP Section 3.6.2). The Proposed Action is a permissible conditional use at the Project Site (AG-2 zoning), in accordance with the LUO (Section 6.3.2, *CCH Land Use Ordinance*).

The Proposed Action is consistent with all relevant WSCP policies and objectives, as summarized in Table 6-12.

**Table 6-12 WSCP Policies and Objectives**

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
<b>WSCP 3.2 Land Use</b>	
<b>3.2.2 Open Space and Important Views</b>	
Do Not Allow Significant Negative Impacts on Large Open Spaces	Although a change in land use is proposed, the open space character of the Project Site would be retained as a result of the visual mitigation measures that PVT will implement to block views to waste management operations. There are few observers in the community that would see the Project Site on a regular basis because the population densities are low in the vicinity and the traffic on Lualualei Naval Road is generally limited to commercial and military vehicles. On closure of the landfill, the heavy equipment and buildings would be removed and final vegetative cover would be established (Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> and Section 5.4, <i>Scenic Resources</i> ).
Address Project Impacts on Open Space	
Do Not Allow Significant Negative Impacts on Important Public Views	No important or documented public views include the Project Site or Proposed Action (Section 5.4, <i>Scenic Resources</i> ). The Proposed Action would not be visible from most public locations in the community due to the built environment, topography, and distance. From those locations where it would be visible, only the upper portion of the landfill would be seen. This portion would be covered in vegetation and blend into the Puu Heleakala backdrop. The Proposed Action includes numerous mitigation measures such as landscaping and berms to obstruct views to the waste management operations.
Address Project Impacts on Important Public Views	
Limit Urban Development to Rural Residential	N/A. The Proposed Action would have no impact on the undeveloped open spaces north of Kepuhi Point that are designated for protection under this policy. The Proposed Action does not include residential or

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
	other high-density development characteristic of “urban.”
Government Agencies Should Partner with Community-based Organizations in order to Better Manage Waianae's Open Spaces	N/A. PVT is not an agency or community-based organization.
Minimize Outdoor Lighting	No operations would occur at night and any security lighting would be directed to the ground.
WSCP 3.3 Coastal Lands	
Do Not Allow New Coastal Development	N/A. The Project Site is not on coastal lands or within the CCH SMA.
Incrementally Acquire Coastal Properties	
Discourage Shore Armoring	
Government Agencies Should Partner with Community-based Organizations in order to Better Manage Waianae's Coastal Lands	
Prohibit Projects that Negatively Impact Coastal Lands	
Prevent the Introduction of Alien Species	
Maintain Beaches/Sand	
WSCP 3.4 Mountain Forest Lands	
Protect Mountain Forest Lands	N/A. The Project Site is not on Mountain Forest Land.
Develop Forest Restoration Program	
Do Not Grant Permits that Negatively Impact Mountain Forest Lands	
Government Agencies Should Partner with Community-based Organizations in order to Better Manage Waianae's Mountain Forest Lands	
Protect Rare and Endangered Species	No protected or candidate species or habitats were identified on the Project Site (Section 3.7, <i>Biological Resources</i> and Appendix E).
Prevent the Introduction of Alien Species	N/A. The Proposed Action would not introduce alien species.
Allow Public Access to Hiking Trails	N/A. There are no hiking trails on the Project Site and no authorized hiking on adjacent parcels.
Develop Wildfire Management Plan	PVT would implement their Emergency Fire Plan to respond to fires and adhere to established protocols for fire prevention. These policies are included in the HDOH-approved SWMP Operations Plan.
WSCP 3.5 Streams and Floodplains	
Establish Stream Conservation Corridors	

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
Restrict Uses Within the Stream Conservation Corridors	N/A. Figure 6-3 shows the stream corridors identified in the WSCP. The Proposed Action would not directly or indirectly impact streams, stream conservation corridors or floodplains (Section 3.4, <i>Water Resources</i> ). Stormwater would be managed during construction and operations and PVT will comply with NPDES permit conditions, including monitoring and reporting.
Establish Minimum In-Stream Flow Standards	
Government Agencies Should Partner with Community-based Organizations in order to Better Manage Waianae's Streams and Stream Corridors	
WSCP 3.6 Historic and Cultural Resources	
Preserve Major Concentration of Cultural Sites and Allow Access for Cultural Practices	N/A. Figure 6-3 shows the Project Site is not located in or adjacent to areas identified as having a “Major Concentration of Cultural Sites”, as shown on (Figure 6-3). No traditional cultural practices were identified at the Project Site in Section 5.2, <i>Cultural Resources</i> and the CIA (Appendix H). Three unrelated historic sites were identified within the Project Site but outside of the proposed development area (Section 5.1, <i>Archaeological and Historical Resources</i> and Appendix G). A <i>Preservation Plan</i> was prepared by CSH and approved by SHPD for one of the historic sites. It will be implemented as part of the Proposed Action.
Do Not Allow Development that Negatively Impacts Important Cultural Sites or Access to such Sites	N/A. No traditional cultural practices were identified in Section 5.2, <i>Cultural Resources</i> and Appendix H. Historic sites within the Project Site would be managed to avoid negative impacts based on SHPD-approved recommendations including access controls.
Government Agencies Should Partner with Community-based Organizations in order to Better Manage Waianae's Cultural Sites	N/A. PVT is not an agency or community-based organization but will adhere to SHPD-approved plans and recommendations.
Create Signage for Cultural Sites	N/A. No Cultural Sites were identified. Signage is not always appropriate for historic sites and SHPD did not recommend signage for the three historic sites identified.
Protect and Allow Access for Cultural Practices at Sites on City-Owned Lands	N/A. Project Site is private land.
Protect and Allow Access for Cultural Practices at Sites on Federal, State, or Private Lands	N/A. No cultural practices were identified at the Project Site (Section 5.2, <i>Cultural Resources</i> and Appendix H).



WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
Conduct a Thorough Cultural Survey of the Waianae District	Section 5.2, <i>Cultural Resources</i> summarizes the CIA prepared for the Project Site and Proposed Action. The CIA is included in Appendix H. It contains a thorough cultural survey of the Lualualei ahupuaa and the Project Site within the Waianae District.
WSCP 3.7 Agricultural Lands	
Maintain the Boundary for Agricultural Lands	The Proposed Action would not alter the agricultural lands boundary.
Support Agriculture through Zoning Regulations and Tax Assessments	N/A. PVT has no control over zoning or property tax assessment. However, the proposed use is a conditionally-approved use in the AG-2 zone.
Limit the use of "Agriculture" Land to Agriculture and other Compatible Land Uses	The Project Site is not suitable for agricultural production (Section 6.2.2.7, <i>Agricultural Productivity Ratings</i> ). The Project Site has not historically been used for agriculture crops, grazing, or traditional gathering. The Proposed Action is compatible with surrounding land uses (Section 5.3, <i>Socioeconomic Resources and Land Use Characteristics</i> ) and is a conditionally permitted use of AG-2 zoned land (Section 6.3.2, <i>CCH Land Use Ordinance</i> ). A change in the WSCP agricultural boundary is not proposed.
Prohibit Incompatible Land Uses of "Agriculture" Land	
Coordinate Farmer's Markets and Other Low-Cost Marketing Outlets	N/A. PVT is not involved in agricultural markets.
WSCP 3.8 Residential Land Use	
Do Not Increase Lands Designated "Residential"	N/A. Residential land use is not proposed.
Coordinate with the DHHL	
Preserve Agricultural Lands	
Support Home-Based Businesses	
Although Allowed to be Exempt by State Law, 201 H Projects Should Meet WSCP Guidelines	
WSCP 3.9 Commercial and Industrial Uses	
Encourage the Continuation of Existing Commercial Establishments	PVT is an existing commercial business and an acceptable use of agriculture land located outside of and adjacent to the WSCP Community Growth Boundary. The Proposed Action would be a continuation of a commercial establishment outside of
Encourage Establishment of Commercial Businesses that Serve the Community	

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
	the Community Growth Boundary (Section 6.4.1.4, <i>Community Growth Boundary</i> ).
Support the Continued Viability of the Makaha Resort	N/A.
Prohibit "Big Box" Stores	N/A.
Encourage Light Industrial Businesses	N/A. The Proposed Action is not light Industry
Do Not Allow Heavy Industry	N/A. The Proposed Action is not heavy industry.
WSCP 3.10 Country Towns, Rural Community Centers and Gathering Places	
Establish a Phased Development Program	N/A. The Proposed Action is not a community planning project.
WSCP 3.11 Parks and Recreational Areas	
Develop Adequate Public Parks	N/A. The Project Site is not identified as a park or recreation area in the WSCP maps (Figure 6-3). The Proposed Action would have no impact on parks or recreational facilities (Section 4.6, <i>Community Facilities</i> ).
Prohibit More Golf Courses That Compete with Agriculture or Open Space Resources	
Plan for a System of Hawaiian Cultural and Educational Parks	
WSCP 3.12 Military Land Use	
Preserve and Transition Military Lands to Civilian Use	N/A. No military lands would be affected.
Organize and Implement Cooperative Programs	N/A. However, PVT has rights to use Lualualei Naval Road and works with the military to reduce speeding and minimize dust on Lualualei Naval Road.
WSCP 4.0 Public Facilities and Infrastructure	
WSCP 4.1 Transportation Systems	
Implement Farrington Highway Safety Improvements for Pedestrians and Motorists	N/A. However, various emergency routes have been discussed that may include segments on or adjacent to the Project Site. A bike path segment has been discussed adjacent to the Project Site. The Proposed Action would have no impact on these plans (Section 4.1, <i>Transportation</i> ).
Beautify Farrington Highway	
Establish an Emergency Bypass Road	
Enhance Public Transportation	
Encourage Other Modes of Transportation	
WSCP 4.2 Potable and Non-Potable Water Systems	
Implement Watershed Protection Strategies to Improve Forest Health & Perennial Stream Flows	N/A.
Encourage Water Conservation	PVT minimizes the use of potable water through the use of non-potable water for uses that can tolerate lower water quality standards, such as dust control (Section 4.3, <i>Water and Wastewater</i> ).
Diversify Water Supply, Matching Quality with Use	
Support the Goals and Objectives of the Adopted Waianae Watershed Management Plan	The Proposed Action supports the goals and objectives of the Waianae Watershed Management

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
	Plan (Refer to Section 6.4.2, <i>Waianae Watershed Management Plan</i> ).
WSCP 4.3 Wastewater Collection and Treatment Systems	
Continue Phased Program for Replacement of Old Sewer Lines	N/A. The Proposed Action would have no impact on public wastewater infrastructure. PVT manages wastewater independent of the CCH system (Section 4.3, <i>Water and Wastewater</i> ).
Improve the Waianae Wastewater Treatment Plant	
Coordinate with DHHL regarding Sewer Connections	
WSCP 4.4 Electrical Power and Communications	
Reduce the Visual Impact and Improve Safety of Utility Lines and Poles and Reliability of Service	N/A. PVT would use existing HECO infrastructure as needed, supplemented by onsite renewable energy generation. No new powerlines are required (Section 4.4, <i>Power and Communication</i> ).
Encourage the Development of Alternative Energy Sources	The Proposed Action would support the alternative energy goals and minimize reliance on HECO's infrastructure by generating and using renewable energy onsite. PV panels and power generated from C&D debris are proposed (Section 2.5.5, <i>Proposed Renewable Energy Production</i> ).
WSCP 4.5 Drainage Systems	
Develop Waianae District Local Drainage Improvements Plan and Program	N/A.
Establish a Sediment Control Program	PVT will adhere to HDOH-approved erosion control plans and NPDES permit conditions for the development and operations at the Project Site. No direct or indirect impacts to stream water quality is anticipated (Section 3.4, <i>Water Resources</i> ).
WSCP 4.6 Solid Waste Handling and Disposal	
Enforce Anti-Dumping Laws	N/A. PVT's continued operations would provide the public an alternative to illegal dumping of C&D debris (Section 4.2, <i>Solid Waste and Litter</i> ).
Encourage Green Waste Composting	N/A.
WSCP 4.7 Civic, Public Safety and Education Facilities	
Improve Quality of Facilities and Adequacy of Staffing	The Proposed Action would have no effect on the specific Civic, Public Safety and Education Facilities' objectives (Section 4.5, <i>Emergency Services</i> and Section 4.6, <i>Community Facilities</i> ). PVT does support education in the community through scholarship
Selection of Sites for New Schools should comply with the WSCP Criteria	
Consider Multi-Purpose Function of Schools	

WSCP Policies/Objectives	Relevance to the Proposed Action (N/A = Not Applicable)
Encourage Charter Schools	funding and providing class tours of the PVT ISWMF. PVT would continue to support the <i>CCH Disaster Debris Management Operations Plan</i> during recovery, as a designated waste manager. This designation means that, in the event of a disaster, the roads on the Leeward side would be some of the first to be opened or cleared of debris so that debris from other locations could be brought to the site for handling. The road clearing would primarily give access for fire, police, hospitals, harbor, airport and landfill traffic. It would also benefit Waianae residents in providing a route out of the Waianae Region.
Increase Ambulance Service	
Provide Adequate Emergency Shelters	
WSCP 4.8 Health Care Facilities	
Support Quality, Community Health Care Facilities	N/A. The Proposed Action would have no impact on health care facilities (Section 4.5, <i>Emergency Services</i> ).
Assess the Need for New Health Care Facilities and Services	

Source: WSCP 2012.

#### 6.4.1.3 WSCP Public Facilities Map

The PVT operations pre-date the 2012 WSCP. WSCP Section 4.6, *Solid Waste Handling and Disposal*, describes PVT's role in the community, as follows: "Noncombustible solid waste, construction and demolition (C&D) debris, and industry wastes go directly to a privately-owned landfill—the PVT Nanakuli Construction and Demolition Material Landfill, located in the Waianae District, on Lualualei-Naval Station Road."

As described in Section 2.2, *Purpose and Need for the Proposed Action*, the CCH relies on PVT to provide 1) responsible C&D debris and landfill management, 2) disaster debris management, and 3) state of the art sorting/recycling/reuse technologies that currently divert 80% of the waste from the landfill.

PVT operations are identified as part of the community's existing and long-term future infrastructure on the WSCP Public Facilities Map (Figure 6-3). The Proposed Action is a continuation of PVT operations and is consistent with the long-range planning for solid waste management. The Project Site was intended for use as a public facility when the existing PVT operations reached capacity.

Historically, the PVT ISWMF property and the Project Site were one parcel, but the Navy, with the permission of the landowner, bisected the property into two pieces in 1931. Both properties retained access rights via the Lualualei Naval Road. In 1977, the CCH conducted an extensive *Inventory Study of Potential Sanitary and Demolition Landfill Sites* (CCH 1977). The Inventory refers

to and assesses the two properties collectively as one candidate site, “Nanakuli Landfill Site”, and individually as “Nanakuli Site A” and “Nanakuli Site B.” Nanakuli Site A, the “old quarry” became the Nanakuli Landfill and is the current PVT operations area. “Nanakuli Site B” (the Project Site) was identified as the next phase of landfill development to extend the life of the landfill when the Nanakuli A site reached capacity. Based on nineteen criteria, the Nanakuli Site was ranked the highest of the Leeward sites.

Both sites are important components of the CCH solid waste management plan. A Category 4 Hurricane that directly hits Oahu is considered the worst-case probable disaster planning scenario. Under this scenario, the workshop attendees determined PVT would receive 2/3 of the anticipated 4 million cubic yards of all C&D debris generated on Oahu, which is comparable to filling Yankee Stadium five times. PVT would receive the debris, bury it, and recover it later for recycling. The Project Site and the existing PVT ISWMF together provide sufficient area for the post-disaster recovery operations. The continued presence of the recycling operations onsite would expedite the debris processing.

During development of the WSCP, PVT testified the Project Site was an essential component of disaster response planning and while there was not an immediate need for the site, PVT planned to use it for a C&D debris recycling and landfill facility in the future, when the current facility closed. In response to a request by Honolulu City Council, PVT provided additional information on the planned use of Nanakuli B (Project Site) as follows:

“...it is important to note that the Nanakuli-B Property sits on acreage that the City has designated—pursuant to the City’s Disaster Debris Management Operations Plan—as a transitional storage area for proper recycling or processing for disposal of debris that might result from a hurricane, tsunami or other natural disaster. Should such a disaster occur, there is likelihood that the Nanakuli-B Property would be needed for that important purpose.

The Nanakuli-B Property was so-designated because of its size and its close proximity to both Waimanalo Gulch and PVT’s current landfill.

This designation means that, in the event of a disaster, the roads on the Leeward side would be some of the first to be opened or cleared of debris so that debris from other locations could be brought to the site for handling.

The top priority for road clearing is to give access for fire, police, hospitals, harbor, airport and landfills.

Finally, for community safety reasons and to prepare the site in the event of a natural disaster, over the next several years PVT hopes to improve the Nanakuli-B Property for better drainage, flood control and fire control.”



#### 6.4.1.4 Community Growth Boundary

The WSCP designates a Community Growth Boundary (Figure 6-3), that is intended “to limit urban development and prevent the encroachment of residential and commercial development into agricultural areas” (WSCP 2012 Section 3.6.2.1). The WSCP Public Facility Map identifies the PVT operations as a public facility that is an acceptable use of Agriculture land located outside of and adjacent to the Community Growth Boundary (Figure 6-3). PVT is not seeking a change in the WSCP Community Growth Boundary or the Agriculture designation.

#### 6.4.2 Waianae Watershed Management Plan

The State Water Code (HRS Ch. 174) protects, controls and regulates the use of the State’s water resources for the benefit of its people and the environment. In accordance with the State Water Code and ROH 90-62, the CCH prepared the Oahu Water Management Plan (OWMP) that is composed of eight regional watershed management plans, including the Waianae Watershed Management Plan (WWMP) (BWS 2009, CCH 2009):

“The overall goal of the Oahu Water Management Plan is: ‘to formulate an environmentally holistic, community-based, and economically viable watershed management plan that will provide a balance between: (1) the preservation and management of Oahu’s watersheds, and (2) sustainable ground water and surface water use and development to serve present users and future generations”.

The WWMP details policies and strategies to advise the CCH in the management, conservation, development, and allocation of surface water and groundwater resources in the Waianae District until 2030. The major objectives of the WWMP are the same as OWMP. However, the sub-objectives of the WWMP are specific to Waianae. The Proposed Action would be consistent with this goal through implementation of environmental controls and practices that protect water resources. Sustainability would be supported by maximizing the use of non-potable water onsite to minimize the demand on potable water. Table 6-13 summarizes the Proposed Action’s consistency with the OWMP and WWMP.

**Table 6-13 Consistency with OWMP and WWMP Goals and Objectives**

WWMP Objective 1: Promote Sustainable Watersheds.	Proposed Action Consistent?		
Plan and Take Action Towards a More Sustainable Future for the Waianae Watershed and Community	Yes	No	N/A
Strive to enhance and protect natural resources including land, stream, and near shore ecosystems.	X		
Strive for regional self-sufficiency, where practical.	X		
Protect the community from natural and human-induced hazards	X		
<b>Discussion:</b> The Proposed Action would be consistent with Objective 1, including implementation of environmental controls, maximizing non-potable water onsite, and practices that protect water resources			

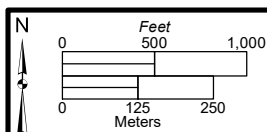
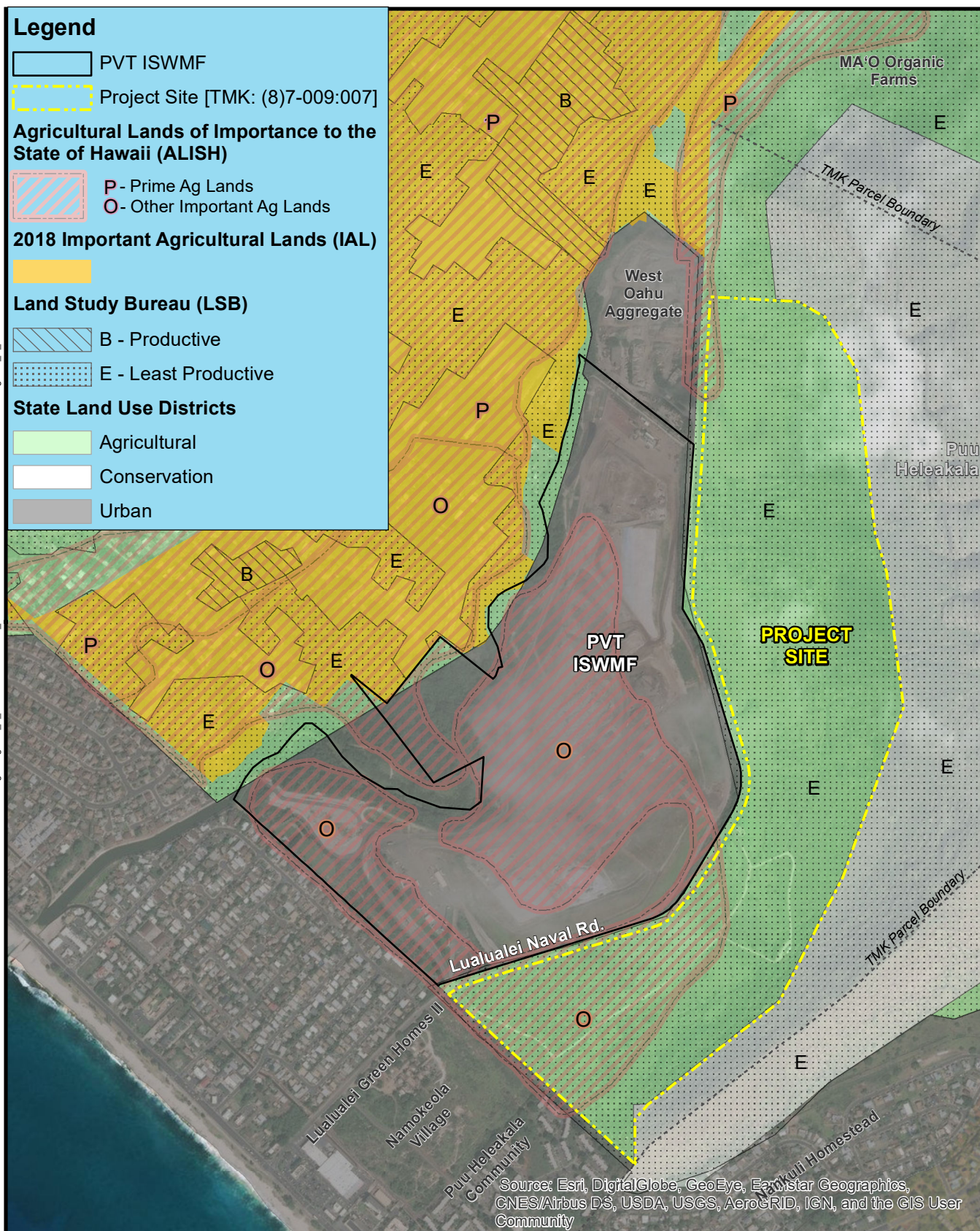
(Section 2.5, <i>Description of the Proposed Action</i> ). The Proposed Action promotes a sustainable watershed by including energy self-sufficiency for the site, proper and safe disposal of C&D waste minimizing illegal dumping, mitigating natural hazards in engineering design and compliance with building codes and other permit conditions.			
<b>WWMP Objective 2: Protect and enhance water quality and quantity.</b>			
<b>Protect and Restore the Quantity and Quality of Groundwater and Surface Water in the Waianae District</b>			
Maintain and improve sustainable quantities of ground water.	X		
Protect the quality of ground, surface, and near shore waters for potable, recreational, and habitat needs.	X		
<b>Discussion:</b> The Proposed Action would have no impact on coastal, surface, or groundwater quality (Section 3.4, <i>Water Resources</i> ). The Proposed Action would protect surface and groundwater quality through best management practices, engineering design and compliance with permit requirements. The quality of the resources will continue to be monitored regularly.			
<b>WWMP Objective 3: Protect Native Hawaiian rights and traditional and customary practices.</b>			
<b>Understand and respect Native Hawaiian rights and traditional cultural practices that depend on healthy and sustainable land and water resources.</b>			
Develop a working relationship with Waianae's Native Hawaiian Community for the sustainable management of the District's water resources.			X
Incorporate traditional Hawaiian values, cultural practices, and water rights into the modern context.	X		
<b>Discussion:</b> The sustainable management of water resources is not applicable to the Proposed Action because no surface water resources would be affected, and PVT does not manage watersheds or projects. This EIS considers potential cultural and archaeological impacts of the Proposed Action. Section 5.2, <i>Cultural Resources</i> and the CIA (Appendix H) did not identify traditional cultural practices at the site. Section 5.1, <i>Archaeological and Historical Resources</i> and Appendix G describes the three historic sites identified on the Project Site, but outside of the proposed development area. SHPD accepted the archaeologists' recommendations and protective measures will be implemented by PVT.			
<b>WWMP Objective 4: Facilitate public participation, education, and project implementation.</b>			
<b>Develop the WWMP and related plans and programs through an ongoing collaborative process with the Waianae community.</b>			
Partner with the community to promote a sense of kuleana, and to balance access to resources with management responsibility.	X		
Partner with agencies at multiple levels to improve efficiency and potential for project implementation.			X
<b>Discussion:</b> The HEPA process affords the community an opportunity to comment on the Proposed Action. Community outreach efforts include publication of the EISPN, presentation at the Nanakuli-Maili Neighborhood Board Meeting, hosting an open house, and meetings with various community and industry organizations. The Proposed Action provides continued management of the only commercial C&D waste			

facility on Oahu in a controlled environment to protect the watershed at the site and other watersheds from the impacts of illegal dumping. PVT sponsors various community activities and provides educational tours of the facility demonstrating sustainable practices.			
<b>WWMP Objective 5: Meet water demands at reasonable costs</b>			
<b>Provide for present and future potable and non-potable water needs of the Waianae community in a cost-effective manner.</b>			
Provide water at a reasonable cost to the community.			X
Efficiently meet potable water demands.			X
Improve and maintain BWS water system reliability.			X
<b>Discussion:</b> The Proposed Action would not appreciably impact water demand and would have no impact on BWS services (Section 4.3, <i>Water and Wastewater</i> ).			

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## State Land Use Districts and Agricultural Productivity Ratings

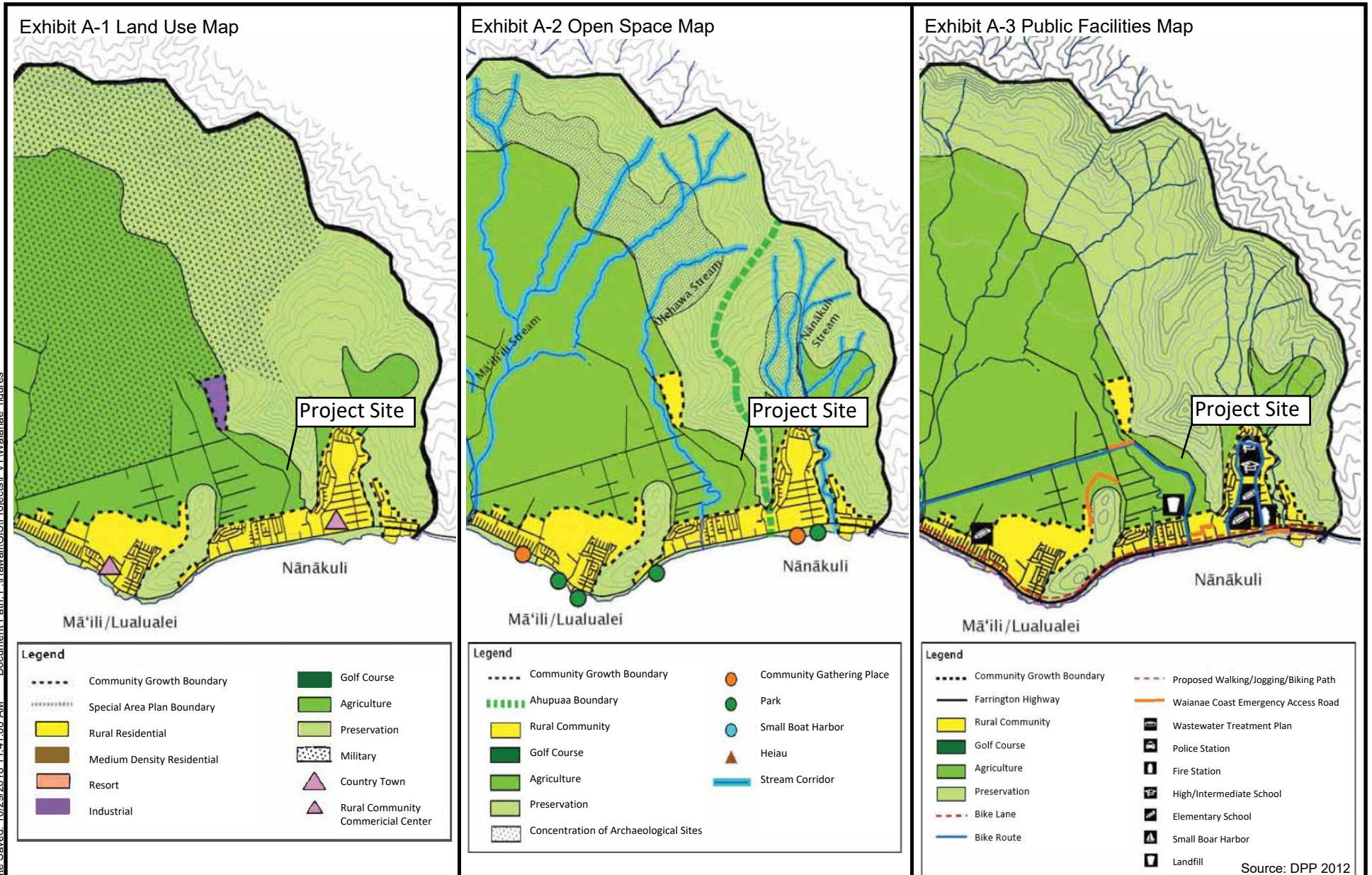
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
6-1









## Waianae Sustainable Community Plan Maps (excerpts)

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**6-3**

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## 7 OTHER IMPACTS AND CONCERNS

This section addresses other impact categories and issues including: 1) cumulative impacts; 2) irreversible and irretrievable commitment of resources; and 3) the relationship between local short-term uses and the maintenance and enhancement of long-term productivity.

### Section Contents

7.1	Cumulative Impacts .....	7-3
7.2	Irreversible and Irretrievable Commitment of Non-Renewable Resources and Unavoidable Impacts .....	7-8
7.3	Relationship Between Local Short-Term Uses of Humanity's Environment and Maintenance and Enhancement of Long-Term Productivity .....	7-9
7.4	Unresolved Issues .....	7-10

The following revisions were made to Section 7 in the Final EIS in response to the Draft EIS comments.

Section	Page	Revisions				
7.1.2	7-5	8	MAO Farms <u><b>MA'O Organic Farms</b></u> representatives presented plans to expand their farming operations to the former Tropic Lands, LLC parcel (TMK: 8-7-009:002). <sup>7,8</sup> <u><b>MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and plans to develop the parcel into a working farm and affordable, farm-worker housing project.</b></u>	Agriculture	Land acquired.	MAO Farms <u><b>MA'O Organic Farms</b></u>
		<u>9</u>	<u><b>Street Repairs and Maintenance for Health and Safety in the Region<sup>9</sup>. Improvements to crosswalks, sidewalks and other measures to improve pedestrian safety within DHHL</b></u>	<u><b>Transportation</b></u>	<u><b>In progress.</b></u>	<u><b>DHHL</b></u>

			<u>homesteads and along Farrington Highway.</u>			
		10	<u>Farrington Highway Transportation Corridor Coordination and Improvements<sup>9</sup>. DHHL coordination of ongoing Farrington Highway corridor improvements.</u>	<u>Transportation</u>	<u>In progress.</u>	<u>DHHL</u>
		11	<u>Cemetery Repair and Expansion<sup>9</sup>. Planning and development of the new site for the Nanakuli Cemetery.</u>	<u>Community</u>	<u>In progress.</u>	<u>DHHL</u>
		12	<u>Identify and Plan Community Use Areas<sup>9</sup>. Planning to identify community use areas.</u>	<u>Community</u>	<u>In progress.</u>	<u>DHHL</u>
		Sources: 1) Nanakuli-Mailii Neighborhood Board 2018. 2) KITV 4 2016. 3) Hawaii Community Development Board 2018. 4) Hawaii Bicycling League 2018. 5) KITV 4 2017. 6) CCH 2019b. 7) Nanakuli-Mailii Neighborhood Board 2019. 8) CSH 2019. <u>9) DHHL 2009.</u>				
7.1.3.2	7-7	The future land development projects that induce traffic in the vicinity are likely to contribute to an adverse impact on the LOS of Farrington Highway. Green Homes Lualualei II and the MAO Farms <u>MA'O Organic Farms</u> may have adverse impacts on the LOS on Lualualei Naval Road if access to the sites is provided from Lualualei Naval Road.				
7.1.3.2	7-7	Agricultural land uses, like the proposed MAO Farms <u>MA'O Organic Farms</u> , tend to be low intensity development and would not have an adverse impact on open space or visual character.				

## **7.1 Cumulative Impacts**

Cumulative impacts result from the incremental effects of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (HAR §11-200-2). This section addresses the cumulative environmental impacts of the Proposed Action when added to other projects in the vicinity.

### ***7.1.1 Resources Considered in the Cumulative Impact Analysis***

Potential significant adverse impacts have been anticipated by PVT based on their years of operations in the community. PVT is committed to avoiding or minimizing these anticipated impacts through design, site development, and operations. The specific mitigating measures are described in the Proposed Action description and include compliance with their SWMP. No residual significant adverse impacts were identified.

The Proposed Action could have less than significant adverse impacts on the following resources and could potentially contribute to a cumulative impact when considered in conjunction with reasonably foreseeable future projects:

- Topography, Soils, and Geology (Section 3.2): specifically, soil erosion and slope stability.
- Noise (Section 3.6): specifically, the residential units south the Proposed Action.
- Transportation (Section 4.1): specifically, ground transportation and traffic.
- Socioeconomic Resources and Land Use Characteristics (Section 5.3): specifically, loss of open space during the life of the Proposed Action.
- Scenic Resources (Section 5.4): specifically, visual character during the life of the Proposed Action.

The Proposed Action would not contribute to a cumulative impact on the remaining resources analyzed in Sections 3, 4, and 5.

### ***7.1.2 Reasonably Foreseeable Future Actions***

Typically, a set period of time is proposed to frame the cumulative impact analysis. Also, a foreseeable action tends to be limited to programmed or approved projects. The approach for this Final EIS is to not a set timeframe, because many of the projects are important to the community, but dependent on government funding and have undetermined schedules. Geographically, the impact analysis is limited to the vicinity of the Project Site.



Reasonably foreseeable future actions identified in the vicinity of the Project Site were listed in Section 5.3, *Socioeconomic Resources and Land Use Characteristic*, as Table 5-11, *Planned Land Use Changes*. These projects are re-presented in this section as Table 7-1 and shown on Figure 5-9.

**Table 7-1 Foreseeable Future Actions**

#	Project Name and Description	Type	Status	Proponent
1	Green Homes Lualualei II. Affordable single-family homes on the parcel adjacent and south; on the eastern edge of Lualualei Naval Road. <sup>1</sup>	Residential	Land acquisition complete and site planning and permitting is underway.	Green Homes Lualualei II, Inc.
2	Waianae Coast Emergency Access Road would provide the geographically isolated Waianae Region an emergency exit route and an alternative to Farrington Highway. The route includes privately-owned roadways that are gated and accessible only in the event of an emergency. The project has been discussed for over 20 years.	Transportation	In 2018, CCH appropriated \$3 million for land acquisition, planning, and design for an extension of the route <sup>2</sup> .	CCH Department of Emergency Management
3	Nanakuli Village Center: (TMK: 8-7-008:077). <sup>3</sup>	Residential/Community	In progress.	DHHL/Hawaii Community Development Authority
	• Commercial Center: retail, a health center, and dialysis clinic.	Community	Estimated Completion 2019.	
	• Agnes B. Cope Learning Center (Community Center).	Community	Estimated Completion 2019.	
	• Hale Makana O Nanakuli (48 Affordable Rental Housing Units).	Residential	Completed 2018.	
4	Leeward Bikeway <sup>4</sup> within former Oahu Railroad and Land Company's right-of-way. Phase I: Waipahu Depot Rd to Philippine Sea Rd. Phase II: Waipio Point Access Rd. to Lualualei Naval Rd.	Transportation	Phase I: funded. Phase II: pending funding for land acquisition.	HDOT
5	PVT ISWMF Closure. (TMK 8-7-009:025; 8-7-021:035). Beneficial land use options are being considered.	Commercial/Open Space	Final closure dependent on C&D landfill reaching maximum permitted capacity.	PVT
6	Waianae Coast Parallel Road <sup>2,5</sup> is an alternative to Farrington Highway to be accessible at all times. Segments of the	Transportation	In 2016, \$3 million was approved by the State legislature for a	DHHL/HCDA

#	Project Name and Description	Type	Status	Proponent
	Waianae Coast Emergency Access Road and Waianae Coast Parallel Road overlap. One segment being considered is aligned along the southern boundary of the Project Site that would connect Lualualei Naval Road and Haleakala Avenue.		secondary access road. These funds were matched by the County (See Project 2). In January 2019, the segment along PVT's boundary was not supported by the neighborhood board <sup>5</sup> .	
7	Nanaikeola Villages (TMK:8-7-008:076) <sup>6</sup> Master-planned community to include self-help, single-family homes, duplexes, possibly a multi-family complex for seniors, and a child's daycare center. 33 units are designated in the TMK record.	Residential	Land acquired.	Hawaii Intergenerational Community Development Association
8	MA'O Organic Farms representatives presented plans to expand their farming operations to the former Tropic Lands, LLC parcel (TMK: 8-7-009:002). <sup>7,8</sup> MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and plans to develop the parcel into a working farm and affordable, farm-worker housing project	Agriculture	Land acquired.	MA'O Organic Farms
9	Street Repairs and Maintenance for Health and Safety in the Region <sup>9</sup> . Improvements to crosswalks, sidewalks and other measures to improve pedestrian safety within DHHL homesteads and along Farrington Highway.	Transportation	In progress.	DHHL
10	Farrington Highway Transportation Corridor Coordination and Improvements <sup>9</sup> . DHHL coordination of ongoing Farrington Highway corridor improvements.	Transportation	In progress.	DHHL

#	Project Name and Description	Type	Status	Proponent
11	Cemetery Repair and Expansion <sup>9</sup> . Planning and development of the new site for the Nanakuli Cemetery.	Community	In progress.	DHHL
12	Identify and Plan Community Use Areas <sup>9</sup> . Planning to identify community use areas.	Community	In progress.	DHHL

Sources: 1) Nanakuli-Mailli Neighborhood Board 2018. 2) KITV 4 2016. 3) Hawaii Community Development Board 2018. 4) Hawaii Bicycling League 2018. 5) KITV 4 2017. 6) CCH 2019b. 7) Nanakuli-Mailli Neighborhood Board 2019. 8) CSH 2019. 9) DHHL 2009.

### 7.1.3 Cumulative Impact Assessment

The details of many projects are not available; therefore, the cumulative impact assessment is qualitative.

All of the reasonably foreseeable projects would require government agency review and approval prior to construction to verify regulatory standards for design, construction, and operation are met, including environmental regulations.

#### 7.1.3.1 Construction

It is unlikely the foreseeable projects would be constructed at the same time as the Proposed Action's initial site development. In the event there are concurrent construction projects, there would be a less-than-significant cumulative direct and indirect adverse impacts related to short-term construction noise, fugitive dust, vehicle air emissions, stormwater runoff, soil erosion, slope stability, traffic, and the potential for inadvertent disturbance of buried archaeological resources. All projects would require implementation of standard construction BMPs incorporated in their construction permits (e.g., grading and grubbing, NPDES, and building permit).

#### 7.1.3.2 Operations

■ **Topography, Soils, and Geology (Section 3.2):** Specifically, soil erosion and slope stability. The large-scale agricultural and residential developments would require significant grading and grubbing, which could impact soil erosion and slope stability. All projects, including the Proposed Action, would adhere to best management practices for erosion control and slope stability resulting in a less than significant adverse cumulative effect on these resources.

■ **Noise (Section 3.6):** Specifically, the residential units south of the Proposed Action. All foreseeable actions would likely increase the ambient noise in the vicinity, except for the bikeway and the PVT ISWMF Closure, which are likely to have a beneficial impact on ambient noise levels. The residential development projects would increase the land use density and contribute to a cumulative noise impact on the the existing Heleakala Community. The Proposed Action and the other development projects would be required to meet DOH noise standards at their property

boundaries. The potential cumulative impact on ambient noise is considered a less than significant adverse impact and consistent with the land uses proposed.

■ **Transportation (Section 4.1):** Specifically, ground transportation and traffic.

The Level of Service of Farrington Highway, and the intersection of Farrington Highway and Lualualei Naval Road during peak traffic hours would decrease with and without the Proposed Action by 2030 due to the projected population increase in the Waianae Region (Section 4.1, *Transportation*).

The TIAR recommends three measures to improve the LOS, specifically in the vicinity of the Lualualei Naval Road and Farrington Highway intersection during peak traffic hours. These three measures have not been programmed or funded by government agencies and therefore are not included in the cumulative impact analysis. If included, there would be a beneficial cumulative impact.

The transportation projects listed in Table 7-1 would provide alternative transportation routes and modes of transportation.

The PVT ISWMF landfill closure would have no effect on traffic conditions because the PVT traffic would shift to the Project Site.

The future land development projects that induce traffic in the vicinity are likely to contribute to an adverse impact on the LOS of Farrington Highway. Green Homes Lualualei II and MA'O Organic Farms may have adverse impacts on the LOS on Lualualei Naval Road if access to the sites is provided from Lualualei Naval Road. The potential cumulative adverse impact to traffic of these population inducing projects and the Proposed Action could be mitigated by the traffic improvement projects described in the TIAR (Section 4.1, *Transportation* and Appendix F).

The Proposed Action and reasonably foreseeable future actions would have a less than significant adverse cumulative impact on ground transportation.

■ **Socioeconomic Resources and Land Use Characteristics (Open Space) (Section 5.3) and Scenic Resources (Visual Character) (Section 5.4):**

The residential development projects may have a long-term, adverse impact on the loss of open space and visual character of the community due to the development of vacant land. The foreseeable projects appear to be consistent with the WSCP (DPP 2012). This would be the case with or without the Proposed Action. The projects would be subject to CCH approvals and permits and involve public outreach. Another benefit of developing vacant land adjacent to existing developed areas is the reduced risk of wildfire hazards that spread quickly to developed areas.

Agricultural land uses, like the proposed MA'O Organic Farms, tend to be low intensity development and would not have an adverse impact on open space or visual character.

The transportation projects may affect the visual character of the routes if vacant land is used.

The closure of the existing PVT ISWMF landfill would restore the open space character of the site through landscaping, final vegetative landfill cover, and the removal of most buildings and facilities. It would have a beneficial impact on open space and visual character that would offset the Proposed Action impacts. At the end of the proposed landfill lifespan, the Project Site would also be closed in a manner that would restore the open space character of the site.

The socioeconomic importance of affordable housing, transportation improvements, community facilities, agricultural development and the Proposed Action would counterbalance the potential adverse impact to open space and visual character. Upon closure, the Proposed Action would restore the open space character of the site. The result would be a less than significant adverse cumulative impact on open space and visual resources.

In summary, the Proposed Action would not have a substantial cumulative adverse effect on the environment.

## **7.2 Irreversible and Irretrievable Commitment of Non-Renewable Resources and Unavoidable Impacts**

A commitment of resources is irreversible when its direct or indirect impacts limit the future options for a resource (HAR §11-200-17(k)). The term applies primarily to non-renewable resources, such as cultural resources and biological species. No historic or cultural properties or protected biological resources would be directly or indirectly harmed or lost under the Proposed Action.

Irreversible commitments required by the Proposed Action would include materials, capital, manpower, and energy needed to plan, engineer, design, construct, operate, and maintain the proposed facility. However, the Proposed Action is a continuation of the current level of expenditures.

Irretrievable commitments refer to the use or consumption of a resource that is neither renewable nor recoverable for use for a period of time. The proposed use of vacant land would preclude alternative use of the Project Site through the life of the facility. No competing uses were identified, but this represents an irretrievable commitment and unavoidable impact for a period of time. When the facility is closed, beneficial land reuse options would be proposed but the types of land use would be limited. The closed facility would appear as open space providing a visual benefit. With long-term landfill stabilization, land uses such as park land and recreation are possible and have been proven, e.g., Kakaako Waterfront Park and the Sand Island State Recreational Park on Oahu.

The irreversible and irretrievable commitments of resources and unavoidable impacts are offset by the Proposed Action's overall benefit to the CCH's integrated solid waste management plan and emergency debris management program. Other significant benefits include the recycling/reuse operations that would extend the life of the C&D landfill and support State and CCH goals and



objectives for diverting waste from landfills. The Proposed Action would provide a convenient alternative to illegal dumping. The renewable energy processes onsite would offset the energy demand and reliance on fossil fuels. In addition, the socioeconomic benefits to the community and the State and CCH government offset the commitment of resources.

### **7.3 Relationship Between Local Short-Term Uses of Humanity's Environment and Maintenance and Enhancement of Long-Term Productivity**

The relationship between local short-term uses of humanity's environment and the maintenance and enhancement of long-term productivity is the extent to which the Proposed Action involves trade-offs among short-term and long-term gains and losses. The extent to which the Proposed Action forecloses future options, narrows the range of beneficial uses of the environment, or poses long-term risks to health or safety is considered. In this context, short-term and long-term do not necessarily refer to any fixed time periods but shall be viewed in terms of the environmentally significant consequences of the Proposed Action (HAR §11-200-17(j)).

PVT is planning for closure of the PVT ISWMF, per their SWMP. The actual date of closure is dependent on the amount of C&D debris generated on island that is not recyclable. Continued recycling and additional C&D landfill capacity is needed to manage C&D debris on the island to reduce illegal dumping in rural areas, support the construction industry, and handle disaster debris. At present, the entire island of Oahu depends on PVT ISWMF to manage C&D debris. Oahu's H-POWER waste-to-energy facility and WGSL manage only MSW disposal. In a December 2002 notice, the CCH advised contractors and commercial refuse haulers that WGSL no longer accepted loads with any amount of green waste or C&D debris. The CCH directs contractors to contact PVT for their C&D disposal needs (ENV 2005). No alternative C&D debris management options have been proposed.

The Proposed Action would continue to meet a critical need for environmentally responsible disposal of non-hazardous, non-recyclable C&D debris, and provide a long-term benefit to the CCH. The proposed use of the Project Site for C&D debris management and disposal would preclude other land use in the short-term. However, in the long-term, the closed facility would appear as open space and the Project Site would be available for other productive uses. An HDOH-approved closure plan would be implemented to ensure environmental protection beyond the active life of the facility.

There would be no short- or long-term risks to health or safety due to the Proposed Action which would adhere to the HDOH-approved SWMP and other permits and approvals. The Proposed Action would not affect the maintenance and enhancement of long-term productivity.

## **7.4 Unresolved Issues**

Per HAR §11-200-17(n), unresolved issues should be summarized with a discussion of 1) how each issue would be resolved or 2) overriding reasons for proceeding with the Proposed Action without resolving the issue.

No unresolved issues were identified. All significant adverse impacts related to the Proposed Action would be mitigated to less than significant.

## 8 PREPARERS

The Final EIS was prepared for the applicant, PVT Land Company, Ltd., by Hart Crowser, Inc. and Pryzm Consulting LLC. The following list identifies individuals and organizations involved in the preparation of this report and their respective contributions.

### 8.1 Project Development Team

Stephen Joseph	PVT Land Company (Applicant)
Joseph Hernandez	Latte Consulting (Landfill Consultant)
Ali Mehrazarin	A-Mehr, Inc. (Engineering Consultant)
William Lyon	TerraPAC LLC (Geological Consultant)

### 8.2 EIS Preparation Team

#### ***Hart Crowser, Inc.***

Karl Bromwell	Project Manager/Principal Environmental Planner
Faith Caplan, AICP	Senior Environmental Planner
Brittany Cody	Project Coordinator/Environmental Planner
Matthew Fong	Environmental Planner/GIS Specialist
Simone Simbeck	GIS Specialist
Stephanie Bonnington	Administrative Review/QA-QC

#### ***Pryzm Consulting LLC***

Kayla Yost	Environmental Planner
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#### ***Technical Consultants***

Belt Collins Hawaii LLC	Land Use Permits
Brownlie & Lee	Landscape Architect
Cultural Surveys Hawaii, Inc.	Archaeological Literature Review and Field Inspection Report
Cultural Surveys Hawaii, Inc.	Cultural Impact Assessment
D.L. Adams Associates, Ltd.	Environmental Noise Assessment Report
Jeff Brink Inc.	Visual Renderings
Jim Morrow, PhD	Air Quality Impact Report
Juturna LLC	Geology, Hydrology and Water Quality Report
Rana Biological Consulting, Inc.	Biological Surveys Report
The Traffic Management Consultant	Transportation Impact Analysis Report

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## 9 COMMENTS ON THE EISPN AND RESPONSES

### Section Contents

9.1	Introduction .....	9-1
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### 9.1 Introduction

The EISPN was published in the January 23, 2019 issue of the State Environmental Notice. Copies of the EISPN were sent to approximately 60 agencies, organizations, and individuals (see Appendix J, EISPN Distribution List). Written comments were received from 19 of the stakeholders consulted (Table 9-1).

**Table 9-1 Agency Comments on the EISPN**

<b>State of Hawaii</b>
Department of Health, Environmental Management Division
Department of Land and Natural Resources
Department of Transportation, Highways Division
Office of Hawaiian Affairs
Office of Planning
<b>City and County of Honolulu</b>
Board of Water Supply
Department of Design and Construction
Department of Environmental Services, Refuse Division
Department of Facility Maintenance, Division of Road Maintenance
Department of Parks and Recreation
Department of Planning and Permitting
Department of Transportation Services
Honolulu Fire Department
Nanakuli-Mailii Neighborhood Board No. 36
<b>Other Interested Stakeholders and Community Members</b>
The Environmental Justice Working Committee of the Concerned Elders of Waianae
Hawaiian Electric Company
KAHEA: The Hawaiian-Environmental Alliance
Joy Inada, Community Member
Cynthia Rezentes, Community Member
Joseph Simpliciano, Community Member
Jasmine Torres, Community Member

The EISPN comment letters and responses are provided in the subsequent pages as organized in Table 9-1.



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## ***EISPN Comment Letters and Responses - State of Hawaii***

- Department of Health, Environmental Management Division
- Department of Land and Natural Resources
- Department of Transportation, Highways Division
- Office of Hawaiian Affairs
- Office of Planning

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July 9, 2019

Marianne Rossio, P.E., Acting Chief  
Environmental Management Division  
State of Hawaii  
Department of Health  
P.O. Box 3378  
Honolulu, HI 96801

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Rossio:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Marianne Rossio, P.E., Acting Chief Environmental Management Division Department of Health
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 22, 2019
<b>Date of Response:</b>	July 9, 2019

### Clean Air Branch

Comment	Response
<p>If your proposed project:</p> <p><u>Requires an Air Pollution Control Permit</u></p> <p>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.</p>	<p>The draft EIS will discuss potential impacts on air quality.</p> <p>Some of the equipment that are part of the Proposed Action may require a Noncovered Source permit. Potential permit requirements will be discussed in the draft EIS.</p>
<p><u>Includes construction or demolition activities that involve asbestos</u></p> <p>You must contact the Asbestos Abatement Office in the Indoor and Radiological Health Branch.</p>	<p>The PVT ISWMF has long been the only facility on Oahu permitted to accept asbestos containing materials (ACM) for disposal. PVT would continue to accept double-bagged ACM at the existing PVT ISWMF until final grades within this area are achieved, at which time PVT will no longer accept ACM. No ACM disposal area is proposed for the Proposed Action.</p>
<p><u>Has the potential to generate fugitive dust</u></p> <p>You must control all fugitive dust. Note that construction activities that occur near to existing residences, business, public areas and major thoroughfares exacerbate potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that may generate fugitive dust. The plan, which does not require Department of Health</p>	<p>The Proposed Action has the potential to generate fugitive dust. The draft EIS will include a project-specific <i>Air Quality Impact Report</i>, to evaluate potential dust emissions. This report will be included as an appendix to the draft EIS. The air quality discussion will also include a summary of nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. The</p>



<p>approval, should help you recognize and minimize potential dust problems.</p> <p>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 problems.</p> <p>You should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:</p> <ol style="list-style-type: none"> <li>a. Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;</li> <li>b. Providing an adequate water source at the site prior to start-up of construction activities;</li> <li>c. Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;</li> <li>d. Minimizing dust from shoulders and access roads;</li> <li>e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and</li> <li>f. Controlling dust from debris being hauled away from the project site.</li> </ol> <p>If you have questions about fugitive dust, please contact the Enforcement Section of the Clean Air Branch.</p>	<p>draft EIS will discuss dust control measures, including those listed.</p>
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## Clean Water Branch

Comment	Response
<p>The CWB's review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <a href="http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf">http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf</a></p>	<p>The draft EIS will discuss potential impacts to surface and ground water and will address the Clean Water Branch standard comments. A project-specific <i>Geology, Hydrogeology, and Water Quality Report</i> will be included as an appendix to the draft EIS.</p>
<p>1. Any project and its potential impacts to State waters must meet the following criteria:</p> <ul style="list-style-type: none"> <li>a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.</li> <li>b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.</li> <li>c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).</li> </ul>	<p>The draft EIS will discuss potential impacts to State waters. The Proposed Action will comply with applicable provisions of HAR, Chapters 11-54 and 11-55.</p>
<p>2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including stormwater runoff, into State surface waters (HAR, Chapter 11-55).</p> <p>For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least thirty 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <a href="https://eha-cloud.doh.hawaii.gov/epermit/">https://eha-cloud.doh.hawaii.gov/epermit/</a>. You will be asked to</p>	<p>The draft EIS will discuss NPDES requirements. PVT's proposed stormwater discharge activities would require a modification to its NPDES permit, which has monitoring and reporting conditions.</p>

<p>do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.</p>	
<p>3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.</p> <p>Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters ... " (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.</p>	<p>The Proposed Action does not involve work in, over, or under waters of the United States.</p>
<p>4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401, WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.</p>	<p>The Proposed Action will comply with the State's Water Quality Standards.</p>
<p>5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:</p> <ul style="list-style-type: none"> <li>a. Treat stormwater as a resource to be protected by integrating it into project planning and permitting. Stormwater has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that stormwater recharges groundwater supplies and feeds streams and estuaries; to ensure</li> </ul>	<p>The draft EIS will discuss the proposed stormwater management system and address best management practices.</p>

that these water cycles are not disrupted, stormwater cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize stormwater as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider stormwater best management practice approaches that minimize the use of potable water for irrigation through stormwater storage and reuse, percolate stormwater to recharge groundwater to revitalize natural hydrology and treat stormwater which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing stormwater infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

## Safe Drinking Water Branch

Comment	Response
<p>1. The EISPN should also discuss and reference the appropriate Mink and Lau Aquifer (Mink and Lau) Identification and Classification Report when analyzing groundwater quality. Mink and Lau and associated maps form the foundations for the State's drinking water impact assessments.</p>	<p>The draft EIS will discuss and reference the appropriate Mink and Lau Aquifer Identification and Classification Report when analyzing groundwater quality.</p>
<p>2. The proposed landfill is not located over what is currently classified as a drinking water aquifer by Mink and Lau. It is also located about three (3) miles away and down gradient from the nearest drinking water source; therefore, it does not pose a threat to current drinking water sources. There is one unused well on the east side of the parcel with a chloride concentration of &lt; 250 mg/L, so while not classified as a drinking water aquifer there is water of suitable quality.</p>	<p>We note that proposed facility is not located over a drinking water aquifer and does not pose a threat to current drinking water sources.</p>

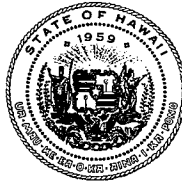
## Solid and Hazardous Waste Branch

Comment	Response
We recommend that you also read our standard comments on our website at: <a href="https://health.hawaii.gov/epo/files/2018/11/SHWB-standard-comments-v3-Nov-2018-update.pdf">https://health.hawaii.gov/epo/files/2018/11/SHWB-standard-comments-v3-Nov-2018-update.pdf</a> .	Our team has reviewed the Solid and Hazardous Waste Branch standard comments. These comments will be addressed in the draft EIS where appropriate.
1. The proposed gasification system appears to be a waste to energy unit. For clarity, we recommend including "waste to energy" as an additional trigger for the Environmental Impact Statement.	The proposed gasification system is not a waste to energy unit. PVT's processed feedstock is not a solid waste; it is a product. HAR § 11-58.1-3, defining "processing" and "solid waste." The gasifier is not an incinerator, nor is it a refuse derived fuel processing facility. HAR § 11-58.1-3, defining "incineration." Therefore, the Proposed Action does not include a waste-to-energy component.
2. As a solid waste management permit is required for the construction and operation of the facility, we will address our specific concerns when we receive your permit application. We note that the proposed landfill is located inland of the underground injection control line. An analysis should be made of the hydrogeology and related groundwater quality to ensure that the proposed liner design will be protective of the underlying resource.	We note that a modification to PVT's Solid Waste Management Permit is required for the construction and operation of the Proposed Action. The draft EIS will discuss hydrogeology and ground water quality. A project-specific <i>Geology, Hydrogeology, and Water Quality Report</i> will be included as an appendix to the draft EIS.

## Wastewater Branch

Comment	Response
The wastewater systems planned for the project shall comply with applicable provisions of Chapter 11-62, HAR, "Wastewater Systems."	The draft EIS will discuss the proposed wastewater system. The Proposed Action will comply with applicable provisions of Chapter 11-62, HAR, "Wastewater Systems."





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

In reply, please refer to:  
File:

February 22, 2019

S0214LI

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, Hawaii 96813  
[eis@pvtland.com](mailto:eis@pvtland.com)

Dear Mr. Bromwell:

SUBJECT: Comments on Environmental Impact Statement Preparation Notice  
City and County of Honolulu, Planning Division, File No. 2018/ED-11  
PVT Integrated Solid Waste Management Facility Relocation  
Waianae District, Oahu  
TMK: (1) 8-7-009:007

The Department of Health (DOH), reviewed the Environmental Impact Statement Preparation Notice (EISPN) dated January 10, 2019 for the subject facility. We understand that the proposed activity is to (1) relocate the Construction and Demolition (C&D) receiving and recycling operations to and operate a new C&D landfill on the opposite side of Lualualei Naval Road from its current location; (2) increase the recycling operations to include two material recovery lines; and (3) install renewable energy facilities (gasification unit and photovoltaic panels) to power operations. Based on our review, we offer the following comments:

Clean Air Branch

The Clean Air Branch comments may be found online:

<https://health.hawaii.gov/cab/files/2018/12/Standard-Comments-Clean-Air-Branch-2018-c.pdf>.

Clean Water Branch

The Clean Water Branch (CWB) has the following comments. The CWB's review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend

that you also read our standard comments on our website at:

<http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>.

1. Any project and its potential impacts to State waters must meet the following criteria:
  - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including stormwater runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least thirty 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to

conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401, WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
  - a. Treat stormwater as a resource to be protected by integrating it into project planning and permitting. Stormwater has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that stormwater recharges groundwater supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, stormwater cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize stormwater as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.
  - b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
  - c. Consider stormwater best management practice approaches that minimize the use of potable water for irrigation through stormwater storage and

reuse, percolate stormwater to recharge groundwater to revitalize natural hydrology and treat stormwater which is to be discharged.

- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing stormwater infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: <http://health.hawaii.gov/cwb/>, or contact the Engineering Section, CWB, at (808) 586-4309.

#### Safe Drinking Water Branch

The Safe Drinking Water Branch has the following comments:

- 1. The EISPN should also discuss and reference the appropriate Mink and Lau Aquifer (Mink and Lau) Identification and Classification Report when analyzing groundwater quality. Mink and Lau and associated maps form the foundations for the State's drinking water impact assessments.
- 2. The proposed landfill is not located over what is currently classified as a drinking water aquifer by Mink and Lau. It is also located about three (3) miles away and down gradient from the nearest drinking water source; therefore, it does not pose a threat to current drinking water sources. There is one unused well on the east side of the parcel with a chloride concentration of < 250 mg/L, so while not classified as a drinking water aquifer there is water of suitable quality.

If you have any questions on these comments, please contact Mr. Norris Uehara, Supervisor of the Underground Injection Control Program at (808) 586-4258.

#### Solid and Hazardous Waste Branch

The Solid and Hazardous Waste Branch (SHWB) has the following comments. We recommend that you also read our standard comments on our website at: <https://health.hawaii.gov/epo/files/2018/11/SHWB-standard-comments-v3-Nov-2018-update.pdf>.

Mr. Karl Bromwell  
February 22, 2019  
Page 5

1. The proposed gasification system appears to be a waste to energy unit. For clarity, we recommend including "waste to energy" as an additional trigger for the Environmental Impact Statement.
2. As a solid waste management permit is required for the construction and operation of the facility, we will address our specific concerns when we receive your permit application. We note that the proposed landfill is located inland of the underground injection control line. An analysis should be made of the hydrogeology and related groundwater quality to ensure that the proposed liner design will be protective of the underlying resource.

If you have any questions regarding these comments, please contact Ms. Lene Ichintosubo at DOH-SHWB at (808) 586-4226.

Wastewater Branch

The wastewater systems planned for the project shall comply with applicable provisions of Chapter 11-62, HAR, "Wastewater Systems."

Thank you for the opportunity to provide comments. Please contact the respective programs should you have any questions.

Sincerely,



MARIANNE ROSSIO, P.E., ACTING CHIEF  
Environmental Management Division

- c: Mr Franz Kraintz, City and County of Honolulu, DPP (via email [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov))  
David Ige, Governor  
Bruce S. Anderson, Ph.D, Director of Health  
DOH, Clean Water Branch  
DOH, Clean Air Branch  
DOH, Safe Drinking Water Branch  
DOH, Solid and Hazardous Waste Branch  
DOH, Wastewater Branch  
Keith E. Kawaoka, Dep. Dir. for Environmental Health

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July 9, 2019

Mr. Russell Y. Tsuji, Land Administrator  
State of Hawaii  
Department of Land and Natural Resources  
Land Division  
Post Office Box 621  
Honolulu, Hawaii 96809

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Tsuji:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Russell Y. Tsuji, Land Administrator Department of Land and Natural Resources (DLNR)
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 22, 2019
<b>Date of Response:</b>	July 9, 2019

### Division of Aquatic Resources

Comment	Response
The Division of Aquatic Resources (DAR) does have concerns due to the potential impacts to water quality, and thus the organisms that reside in the waters makai of the project site. Below we have a few questions, of which we would appreciate your response.	The draft EIS will discuss potential impacts to surface and ground water quality and biological resources. A project-specific <i>Geology, Hydrogeology, and Water Quality Report</i> was prepared for the Proposed Action and will be included as an appendix to the draft EIS.
In section 3.4, preventing run off from the project sites seems to be addressed by a storm water management system. However, has climate change scenarios, such as an increase in floods, been considered by your storm water management plan? If so, how?	<p>The draft EIS will discuss the stormwater management system and stormwater basin design. The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).</p> <p>In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that storm events and the sea level rise associated with climate change will be properly managed with no impact to the Proposed Action.</p> <p>The existing PVT ISWMF stormwater management system was designed and constructed in accordance with the above referenced solid waste regulations. This system has performed well during storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful</p>

	storm events in the future.
In section 3.5, the EIS states that the three aquifers are not ecologically important. DAR disagrees with this statement. What does the EIS base this claim on?	The aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990), classifies the three aquifers as not ecologically important. The reference is: Mink, J. F. and S. Lau. 1990. <i>Aquifer Identification and Classification for the Island of Oahu, Groundwater Protection Strategy for Oahu</i> . Water Resources Research Center, University of Hawaii, Technical Report 179, November 1987 (revised 1990).
In section 3.5, the EIS mentions monitoring wells. DAR would appreciate a detailed map of the monitoring wells. How much of the monitoring wells are located makai of the project site? What parameters are considered at the monitoring wells? How often are the monitoring wells sampled?	<p>The draft EIS will include a project-specific <i>Geology, Hydrogeology, and Water Quality Report</i>. This report will be included as an appendix to the draft EIS.</p> <p>The draft EIS will include a map of existing and proposed monitoring wells, including former monitoring wells that have been closed, and a recent groundwater gradient map for the site. There are currently one upgradient and three downgradient groundwater monitoring wells. The Proposed Action will include another upgradient well and four new downgradient wells. The draft EIS will also discuss the monitoring parameters and the monitoring schedule. As part of the Solid Waste Management Permit for PVT ISWMF, a <i>Groundwater and Leachate Monitoring Plan</i> was prepared and groundwater monitoring is ongoing since 1992. The table below summarizes the current monitoring parameters and schedule. The draft EIS will also discuss the findings over the last 26 years of groundwater monitoring.</p>

#### Groundwater Monitoring Parameters

Analyte	Frequency of Testing
Volatile Organic Compounds (VOCs)	Semiannually
Total Dissolved Solids (TDS)	Semiannually
Chloride, Sulfate	Semiannually
Alkalinity as Calcium Carbonate (CaCO <sub>3</sub> ), Bicarbonate	Semiannually
Calcium, Magnesium, Potassium, Sodium	Semiannually
Arsenic, Cadmium, Chromium, Iron, Lead	Every Five Years
Extractable Petroleum Hydrocarbons – Diesel Range Organics (DRO)	Every Five Years
Total Organic Carbon (TOC)	Every Five Years
Field Measured Temperature, Conductivity, pH and Water Level	Semiannually

## Engineering Division

Comment	Response
<p>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.</p> <p>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) (<a href="http://gis.hawaiiinfip.org/FHAT">http://gis.hawaiiinfip.org/FHAT</a>).</p> <p>If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:</p> <ul style="list-style-type: none"><li>• Oahu: City and County of Honolulu, Department of Planning and Permitting (808)768-8098.</li><li>• Hawaii Island: County of Hawaii, Department of Public Works (808)961-8327.</li><li>• Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.</li><li>• Kauai: County of Kauai, Department of Public Works (808) 241 -4846.</li></ul>	<p>The draft EIS will discuss flood zones. The applicable FHAT reports for the existing PVT ISWMF classifies the site as "Zone X", an area which has been determined to be outside the 0.2% annual chance floodplain (the 500-year floodplain). The applicable FHAT reports for the Project Site classifies the site as "Zone D", an area in which flood hazards have not been determined. The Project Site, while not assessed, sits at an elevation higher than the adjacent PVT ISWMF, therefore it would be located in an area with less risk of flood. The Proposed Action will comply with applicable NFIP and City and County of Honolulu regulations.</p>

## Division of Forestry & Wildlife

Comment	Response
<p><u>Use of Native Plant Species for Landscaping</u> DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW recommends consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (<a href="https://sites.google.com/site/weedriskassessment/home">https://sites.google.com/site/weedriskassessment/home</a>).</p>	<p>A Landscaping Plan is being prepared for the Proposed Action and the conceptual landscaping layout will be included as an appendix to the DEIS. The landscaping will include the use of native and drought tolerant plant species that are appropriate for the area.</p>
<p><u>Invasive Species</u> DOFAW recommends against importing any off-island plant or soil material. Soil and plant material may have fungi (e.g. Rapid 'Ohi'a Death) and other pathogens that could harm our native species and ecosystems. We recommend consulting the Hawai'i Interagency Biosecurity Plan at <a href="http://dlnr.hawaii.gov/hisc/plans/hibp/">http://dlnr.hawaii.gov/hisc/plans/hibp/</a> in planning, design, and construction of the project.</p>	<p>PVT does not propose to import off-island plant or soil material as part of the Proposed Action.</p>
<p><u>Seabird friendly lighting</u> We note that artificial lighting can adversely impact seabirds that may pass through the area at night by causing disorientation. This disorientation can result in collision with manmade artifacts or grounding of birds. For nighttime lighting that might be required, DOFAW recommends that all lights be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird Hedging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. For seabird-friendly lighting information, please refer to DOFAW's website at <a href="http://dlnr.hawaii.gov/wildlife/">http://dlnr.hawaii.gov/wildlife/</a>.</p>	<p>The Proposed Action would operate during daytime hours only. Night lighting would be minimal and shielded to focus light toward the ground. A project-specific <i>Biological Surveys Report</i> was prepared for the Proposed Action and will be included as an appendix to the draft EIS.</p>

<p><b>Hoary Bat</b></p> <p>The State listed Hawaiian Hoary Bat or 'Ope'ape'a (<i>Lasiurus cinereus semotus</i>) has the potential to occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). If this cannot be avoided, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed without consulting DOFAW. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight.</p>	<p>A project-specific <i>Biological Surveys Report</i> was prepared for the Proposed Action and will be included as an appendix to the draft EIS. No Hawaiian hoary bats were detected during the course of this survey. The Project Site does not have woody plants greater than 15 feet tall that would be disturbed during site clearing.</p>
---	--

### Office of Conservation and Coastal Land

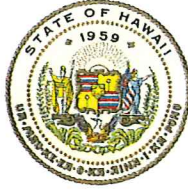
Comment	Response
We have no comments.	Thank you for your interest in the PVT ISWMF Relocation Project. We will keep you informed of the project's progress, including publication of the draft EIS.

### Land Division - Oahu District

Comment	Response
We have no comments.	Thank you for your interest in the PVT ISWMF Relocation Project. We will keep you informed of the project's progress, including publication of the draft EIS.



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 22, 2019

Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, HI 96813

*via email: eis@pvtland.com*

Dear Mr. Shigekuni:

SUBJECT: Environmental Impact Statement Preparation Notice for the **PVT Integrated Solid Waste Management Facility Relocation**, Nanakuli, Waianae District, Island of Oahu, TMK: (1) 8-7-009:007 for the City & County of Honolulu, Department of Planning & Permitting, as Applicant

Thank you for the opportunity to review and comment on the above subject matter. The Land Division of the Department of Land and Natural Resources distributed a copy of your request to selected DLNR Divisions for their review and comments.

Enclosed are comments on the subject matter from DLNR's a) Division of Aquatic Resources, b) Engineering Division, c) Division of Forestry & Wildlife, d) Office of Conservation and Coastal Lands, and e) Land Division – Oahu District. Should you have any questions, please feel free to contact Barbara Lee at (808) 587-0453 or via email at [barbara.j.lee@hawaii.gov](mailto:barbara.j.lee@hawaii.gov). Thank you.

Sincerely,

A blue ink signature of Russell Y. Tsuji, written in a cursive style.

Russell Y. Tsuji  
Land Administrator

Enclosure

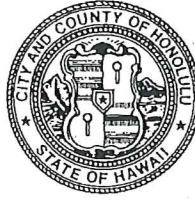
cc: Central Files

Franz P. Kraitnz at C&C Honolulu *via email: [fkraitnz@honolulu.gov](mailto:fkraitnz@honolulu.gov)*

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.gov](http://www.honolulu.gov) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



2019 JAN 25 AM 10:41

RECEIVED  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

KATHY K. SOKUGAWA  
ACTING DIRECTOR

TIMOTHY F. T. HIU  
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI  
DEPUTY DIRECTOR

2018/ED-11 (FK)

January 23, 2019

**MEMORANDUM**

TO: City, State, and Federal Agencies

FROM: *FK*  
Franz P. Kraitz, Acting Chief  
Community Planning Branch, Planning Division

SUBJECT: Environmental Impact Statement Preparation Notice for the PVT Integrated Solid Waste Management Facility Relocation – Nanakuli, Waianae District, Oahu  
Tax Map Key: 8-7-009: 007

Enclosed for your review and comment is a compact-disk copy of the Environmental Impact Statement Preparation Notice (EISP) for the PVT Integrated Solid Waste Management Facility Relocation (Project) proposed on parcel Tax Map Key 8-7-009: 007 in Nanakuli, Waianae District, Oahu. The EISP is prepared in accordance with Hawaii Revised Statutes, Chapter 343 and Hawaii Administrative Rules, Chapter 11-200.

The proposed action is for PVT to provide uninterrupted construction and demolition waste management for Oahu by relocating their existing operations to an adjacent location. The EISP scoping period facilitates early identification of data gaps in the review and analysis of the proposed Project, its potential impacts, and any public concerns to be addressed in the Draft Environment Impact Statement. We would appreciate your organization's review and comments regarding the EISP by **February 22, 2019**. Please refer to file number **2018/ED-11** in your response.

Should you have any questions, please contact me at 768-8046 or [fkraitz@honolulu.gov](mailto:fkraitz@honolulu.gov).

FK:ah

Enclosures

RECEIVED  
2019 JAN 24 AM 10:06  
DEPT. OF LAND  
& NATURAL RESOURCES  
STATE OF HAWAII



87-2020 Farrington Highway ■ Waianae, Hawaii 96792 ■ Tel: 808 668-4561 ■ FAX: 808 668-1368 ■ Website: www.pvtland.com

January 23, 2019

Aloha:

PVT Land Company, LTD (PVT) prepared an Act 172-12 Environmental Impact Statement Preparation Notice (EISPN), pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

TITLE OF PROJECT: PVT Integrated Solid Waste Management Facility Relocation

LOCATION: ISLAND Oahu DISTRICT Waianae

TAX MAP KEY NUMBER: (1) 8-7-009:007

AGENCY ACTION: \_\_\_\_\_ APPLICANT ACTION: X

PROJECT SUMMARY: Attached

**REVIEW THE EISPN ONLINE AT:** [http://oegc2.doh.hawaii.gov/EA\\_EIS\\_Library/2019-01-23-OA-EISPN-PVT-ISWMF-Relocation.pdf](http://oegc2.doh.hawaii.gov/EA_EIS_Library/2019-01-23-OA-EISPN-PVT-ISWMF-Relocation.pdf). Note that the link will not be active until the date of publication on January 23.

**YOUR COMMENTS MUST BE RECEIVED OR POSTMARKED BY: February 22, 2019.**  
(30-day comment period)

**PLEASE SEND ORIGINAL COMMENTS TO THE:**

CONSULTANT: Hart Crowser, Inc.  
ADDRESS: 7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Karl Bromwell / (808) 587-7747  
EMAIL: [eis@pvtland.com](mailto:eis@pvtland.com)

**COPIES OF THE COMMENTS SHOULD BE SENT TO THE FOLLOWING:**

ACCEPTING  
AUTHORITY: Department of Planning and Permitting  
ADDRESS: 650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Franz Krintz, AICP / (808) 768-8046  
EMAIL: [fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

DEPARTMENT OF PLANNING AND PERMITTING  
SUMMARY PROJECT DESCRIPTION

APPLICANT/LANDOWNER : PVT Land Company, Ltd. (PVT)/Leeward Land Company, Ltd., and affiliate of PVT.

AGENT : Hart Crowser, Inc.

APPLICANT'S PROPOSAL & BASIS FOR REQUEST : The purpose of the proposed action is for PVT to provide uninterrupted construction and demolition (C&D) waste management for Oahu by relocating their existing operations to an adjacent location. The existing PVT C&D waste management facility is the only one available for public use on Oahu and is beginning closure per its approved Closure Plan. The proposed project will satisfy Oahu's continued need for a C&D landfill and recycling facility as well as disaster debris processing.

PVT proposes to (1) relocate its C&D debris receiving, recycling, and disposal operation to a parcel on the opposite side of Lualualei Naval Road from its current location, (2) upgrade its recycling operations by installing two materials recovery and processing lines, and (3) install renewable energy facilities (an enclosed gasification unit and photovoltaic panels) to power its operations.

LOCATION : The project site is on the east side of Lualualei Naval Road, opposite the existing PVT C&D waste management facility.

TAX MAP KEYS (TMK) : 8-7-009: 007

LAND AREA : 179.109 undeveloped acres.

STATE LAND USE DISTRICT: Agricultural District.

SUSTAINABLE COMMUNITIES PLAN AREA : Waianae.

SUSTAINABLE COMUNITIES: PLAN LAND USE MAP : Agriculture.

EXISTING ZONING : AG-2 General Agricultural District.

SPECIAL DISTRICT : The project site is not within a Special District.





## Department of Planning & Permitting (DPP)

## Property Information

undefined

Monday, January 28, 2019 | 10:43:37 AM

## General Information

TMK:	87009007:0000
Building Value:	\$23,600.00
Building Exemption:	\$0.00
Land Value:	\$5,142,200.00
Land Exempt:	\$0.00
Acres:	179
Square Feet	0
<u>Property Tax Class:</u>	Agricultural
City:	Waianae
Zip Code:	96792
Realtor Neighborhood:	Maili



Nearest Park:

Nanakuli Beach Park  
Ulehewa Beach Park

show route  
show route

## Tax Bill Owner Information

Name	Type	Address	Address 2	City State Zip
LEEWARD LAND, LLC	Fee Owner		87-2020 FARRINGTON HWY	WAIANAE HI 96792

## 2010 Census Information

Tract Number: 009608 / 940002 / 009608 / 009608 / 940002

Block Number: 1155 / 4001 / 1174 / 1153 / 3000

Population (block): 368 / 1417 / 0 / 0 / 0

## Voting Information

City Council Member: Kymberly Marcos Pine  
Polling Place: Nanaikapono Elem Sch  
Address: 89-195 Farrington Hwy  
Neighborhood Board: NANA KULI/MAIL

## School and Transit Information

Elementary School:	Nanaikapono Nanakuli
High School:	NANAKULI
Near Transit Route:	Yes
Near Bus Routes:	

## Zoning and Flood Information

Zoning ( <u>LUO</u> ) Designation:	AG-2
Ohana Zoning Designation:	Ineligible
FEMA <u>Flood</u> Designation:	D
Tsunami Evacuation Zone:	No

[more public safety info >>](#)

Page Tools: [PRINT](#) | [BOOKMARK](#) | [EMAIL](#) | [STREET/BIRD'S EYE](#)

More info: [ZONE INFO](#) | [BUILDING PERMITS](#) | [PROPERTY TAX](#)

Information shown on these maps are derived from public records that are constantly undergoing change and do not replace a site survey, and is not warranted for content or accuracy.

2010 Assessed Values as of October 1, 2009

Department of Planning & Permitting  
650 S. King St, Ste 8, Honolulu, HI 96813  
gis@honolulu.gov  
**Property Info Page FAQ**

DAVID Y. IGE  
GOVERNOR OF HAWAII



RECEIVED  
LAND DIVISION

2019 FEB 22 AM 10:41



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  
STATE OF HAWAII

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 29, 2019

MEMORANDUM

RECEIVED

JAN 29 2019

Division of Aquatic Resources

DAR 5861

TO: DLNR Agencies:  
☒ Div. of Aquatic Resources  
☐ Div. of Boating & Ocean Recreation  
☒ Engineering Division  
☒ Div. of Forestry & Wildlife  
☐ Div. of State Parks  
☒ Commission on Water Resource Management  
☒ Office of Conservation & Coastal Lands  
☒ Land Division – Oahu District  
☒ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator ✓

SUBJECT: Environmental Impact statement Preparation Notice for the **PVT Integrated Solid Waste Management Facility Relocation**

LOCATION: Nanakuli, Waianae District, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT: City and County of Honolulu, Department of Planning and Permitting

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **February 20, 2019**.

The DEA can be found on-line at: <http://health.hawaii.gov/oeqc/> (Click on The Environmental Notice in the middle of the page.)

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 Barbara Lee at 587-0453. Thank you.

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

Signed: \_\_\_\_\_

Print Name: Brian J. Neilson Acting DAR Administrator

Date: \_\_\_\_\_

2-20-19

Attachments  
cc: Central Files



DAVID Y. IGE  
GOVERNOR OF  
HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF AQUATIC RESOURCES  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

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

ROBERT K. MASUDA  
FIRST DEPUTY

KALEO L. MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Date: 02/20/19  
DAR # 5861

MEMORANDUM

TO: Brian J. Neilson  
Acting DAR Administrator

FROM: Ryan Okano, PhD, Aquatic Biologist

SUBJECT: Environmental Impact Statement Preparation Notice for the PVT Integrated  
Solid Waste Management Facility Relocation

Request Submitted by: Russell Tsuji, Land Administrator, Land Division

Location of Project: Nanakuli Waianae District, Island of Oahu

Brief Description of Project:

The purpose of the proposed action is for the PVT Land Company, Ltd. (PVT) to provide uninterrupted construction and demolish (C&D) waste management for Oahu to be relocating their existing operations to an adjacent location. The existing PVT C&D waste management facility is the only one available for public use on Oahu and is beginning closure per its approved Closure Plan. The proposed project will satisfy Oahu's continued need for a C&D land fill and recycling facility as well as disaster debris processing.

(continued on next page)

Comments:

☐ No Comments ☒ Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved: Brian J. Neilson

Brian J. Neilson  
Acting DAR Administrator

Date: 2/20/19

DAR# 5861

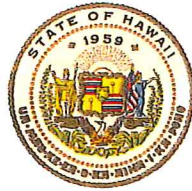
Comments

The Division of Aquatic Resources (DAR) does have concerns due to the potential impacts to water quality, and thus the organisms that reside in the waters makai of the project site. Below we have a few questions, of which we would appreciate your response.

In section 3.4, preventing run off from the project sites seems to be addressed by a storm water management system. However, has climate change scenarios, such as an increase in floods, been considered by your storm water management plan? If so, how?

In section 3.5, the EIS states that the three aquifers are not ecologically important. DAR disagrees with this statement. What does the EIS base this claim on?

In section 3.5, the EIS mentions monitoring wells. DAR would appreciate a detailed map of the monitoring wells. How much of the monitoring wells are located makai of the project site? What parameters are considered at the monitoring wells? How often are the monitoring wells sampled?



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 29, 2019

**MEMORANDUM**

RECEIVED  
LAND DIVISION  
19 JAN 30 PM 03:05 ENGINEERING  
2019 FEB -7 PM 2:47  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

TO:

FROM

**DLNR Agencies:**

- ☒ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

FROM:

SUBJECT:

LOCATION:

APPLICANT:

Russell Y. Tsuji, Land Administrator ✓  
Environmental Impact statement Preparation Notice for the **PVT Integrated Solid Waste Management Facility Relocation**  
Nanakuli, Waianae District, Island of Oahu; TMK: (1) 8-7-009:007  
City and County of Honolulu, Department of Planning and Permitting

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **February 20, 2019**.

The DEA can be found on-line at: <http://health.hawaii.gov/oeqc/> (Click on The Environmental Notice in the middle of the page.)

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 Barbara Lee at 587-0453. Thank you.

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

Signed:

Print Name:

Date:

Carty S. Chang, Chief Engineer

2/7/19

Attachments

cc: Central Files

**DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION**

**LD/Russell Y. Tsuji**

**Ref: Environmental Impact Statement Preparation Notice for the PVT Integrated  
Solid Waste Management Facility Relocation, Nanakuli, Waianae District,  
Island of Oahu; TMK: (1) 8-7-009:007**

**COMMENTS**

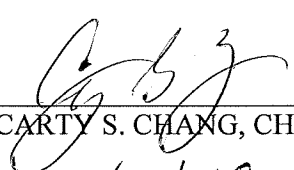
The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 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.hawaiiinfip.org/FHAT>).

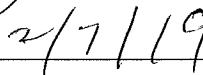
If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

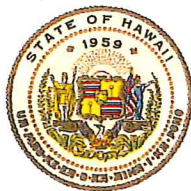
- o Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- o Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- o Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- o Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: \_\_\_\_\_

  
CARTY S. CHANG, CHIEF ENGINEER

Date: \_\_\_\_\_

  
2/7/19



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 29, 2019

**MEMORANDUM**

TO: FROM

**DLNR Agencies:**

- ☒ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

FROM:

SUBJECT:

LOCATION:

APPLICANT:

Russell Y. Tsuji, Land Administrator

Environmental Impact statement Preparation Notice for the **PVT Integrated Solid Waste Management Facility Relocation**

Nanakuli, Waianae District, Island of Oahu; TMK: (1) 8-7-009:007

City and County of Honolulu, Department of Planning and Permitting

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

Signed:

Print Name:

**DAVID G. SMITH, Administrator**

Date:

2/19/19

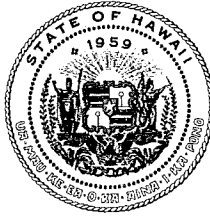
Attachments

cc: Central Files

RECEIVED  
LAND DIVISION  
2019 FEB 20 AM 10:51  
DEPT OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII



DAVID Y. IGE  
GOVERNOR OF  
HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

FEB 20 2019

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

ROBERT K. MASUDA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**MEMORANDUM**

TO: RUSSEL Y. TSUJI, Administrator  
Land Division

FROM: DAVID G. SMITH, Administrator  
Division of Forestry and Wildlife

A handwritten signature in black ink, appearing to read "D.G. Smith", is written over the "FROM" line.

SUBJECT: Review of Environmental Impact Statement Preparation Notice for PVT Integrated  
Solid Waste Management Facility Relocation

Thank you for the opportunity to review the Environmental Impact Statement Preparation Notice for PVT Integrated Solid Waste Management Facility Relocation. The Division of Forestry and Wildlife (DOFAW) would like to offer the following comments for consideration:

Use of Native Plant Species for Landscaping

DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW recommends consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (<https://sites.google.com/site/weedriskassessment/home>).

Invasive Species

DOFAW recommends against importing any off-island plant or soil material. Soil and plant material may have fungi (e.g. Rapid 'Ōhi'a Death) and other pathogens that could harm our native species and ecosystems. We recommend consulting the Hawai'i Interagency Biosecurity Plan at <http://dlnr.hawaii.gov/hisc/plans/hibp/> in planning, design, and construction of the project.

Seabird friendly lighting

We note that artificial lighting can adversely impact seabirds that may pass through the area at night by causing disorientation. This disorientation can result in collision with manmade artifacts or grounding of birds. For nighttime lighting that might be required, DOFAW recommends that all lights be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the

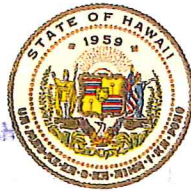


open sea. For seabird-friendly lighting information, please refer to DOFAW's website at <http://dlnr.hawaii.gov/wildlife/>.

#### Hoary Bat

The State listed Hawaiian Hoary Bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). If this cannot be avoided, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed without consulting DOFAW. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight.

Should you have any questions regarding the memorandum, please contact Marissa Chee at [Marissa.M.Chee@hawaii.gov](mailto:Marissa.M.Chee@hawaii.gov) or (808) 587-4177.



2019 JAN 30 P 2:04  
STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 29, 2019

**MEMORANDUM**

TO:

**DLNR Agencies:**

- ☒ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

RECEIVED  
LAND DIVISION  
2019 FEB - 1 AM 10:56  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

FROM: Russell Y. Tsuji, Land Administrator ✓  
SUBJECT: Environmental Impact statement Preparation Notice for the **PVT Integrated Solid Waste Management Facility Relocation**  
LOCATION: Nanakuli, Waianae District, Island of Oahu; TMK: (1) 8-7-009:007  
APPLICANT: City and County of Honolulu, Department of Planning and Permitting

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **February 20, 2019**.

The DEA can be found on-line at: <http://health.hawaii.gov/oegc/> (Click on The Environmental Notice in the middle of the page.)

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 Barbara Lee at 587-0453. Thank you.

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

Signed: \_\_\_\_\_

Print Name: \_\_\_\_\_

Date: \_\_\_\_\_

Sam Lemmo

1.30.19

Attachments

cc: Central Files



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

January 29, 2019

**MEMORANDUM**

TO: **DLNR Agencies:**  
☒ Div. of Aquatic Resources  
☐ Div. of Boating & Ocean Recreation  
☒ Engineering Division  
☒ Div. of Forestry & Wildlife  
☐ Div. of State Parks  
☒ Commission on Water Resource Management  
☒ Office of Conservation & Coastal Lands  
☒ Land Division – Oahu District  
☒ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator ✓

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LOCATION: Nanakuli, Waianae District, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT: City and County of Honolulu, Department of Planning and Permitting

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **February 20, 2019**.

The DEA can be found on-line at: <http://health.hawaii.gov/oeqc/> (Click on The Environmental Notice in the middle of the page.)

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 Barbara Lee at 587-0453. Thank you.

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

Signed: \_\_\_\_\_

*Darlene Bryant-Takamatsu*

Print Name: \_\_\_\_\_

*Darlene Bryant-Takamatsu*

Date: \_\_\_\_\_

*2/11/19*

Attachments

cc: Central Files

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July 11, 2019

Jade T. Butay  
Director of Transportation  
State of Hawaii Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813-5097

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Butay,

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Jade T. Butay, Director of Transportation State of Hawaii Department of Transportation
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	July 1, 2019
<b>Date of Response:</b>	July 11, 2019

Comment	Response
<p>The applicant, PVT Land Company, Ltd. (PVT) proposes to relocate various recycling and disposal facilities from its current location along Lualualei Naval Access Road to an affiliate-owned parcel on the other side of the road. PVT also intended to improve its recycling operation with additional materials recovery and processing lines, and renewable energy facilities.</p> <p>The project requires an Environmental Impact Statement (EIS) in compliance with Hawaii Revised Statutes 343 due to establishment of a landfill to replace PVT's current landfill which will be closed in accordance with its approved Closure Plan.</p> <p>Lualualei Naval Access Road is a roadway under the jurisdiction of the United States that accesses Farrington Highway, State Route 93, at a signalized intersection.</p> <p>The EISPN indicates that PVT is primarily going to relocate existing operations to the new site and has no plans to expand the daily allowed capacity of the facility which would maintain current daily truck trips and current employment.</p> <p>The EIS should reiterate the assertions contained in section 4.1.2 of the EISPN in its discussion. The Hawaii Department of Transportation anticipates, based on these assertions, that there would be no significant impact to our State highway facilities.</p>	<p>The draft EIS will discuss potential impacts of the Proposed Action on traffic and transportation, including state highway facilities.</p> <p>A project-specific <i>Traffic Impact Analysis Report</i> (TIAR) was prepared and will be included as an appendix to the Draft EIS.</p>



DAVID Y. IGE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

JADE T. BUTAY  
DIRECTOR

Deputy Director  
LYNN A.S. ARAKI-REGAN  
DEREK J. CHOW  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN

IN REPLY REFER TO:  
DIR 0065  
HWY-PS 2.0366

July 1, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Environmental Impact Statement Preparation Notice (EISPN)  
PVT Integrated Solid Waste Management Facility Relocation  
Oahu, Waianae, TMK: (1) 8-7-009: 007

The applicant, PVT Land Company, Ltd. (PVT) proposes to relocate various recycling and disposal facilities from its current location along Lualualei Naval Access Road to an affiliate-owned parcel on the other side of the road. PVT also intended to improve its recycling operation with additional materials recovery and processing lines, and renewable energy facilities.

The project requires an Environmental Impact Statement (EIS) in compliance with Hawaii Revised Statutes 343 due to establishment of a landfill to replace PVT's current landfill which will be closed in accordance with its approved Closure Plan.

Lualualei Naval Access Road is a roadway under the jurisdiction of the United States that accesses Farrington Highway, State Route 93, at a signalized intersection.

The EISPN indicates that PVT is primarily going to relocate existing operations to the new site and has no plans to expand the daily allowed capacity of the facility which would maintain current daily truck trips and current employment.

The EIS should reiterate the assertions contained in section 4.1.2 of the EISPN in its discussion. The Hawaii Department of Transportation anticipates, based on these assertions, that there would be no significant impact to our State highway facilities.

If there are any questions, please contact Ken Tatsuguchi, Engineering Program Manager, Highways Division, Planning Branch, at (808) 587-1830 or by email at [ken.tatsuguchi@hawaii.gov](mailto:ken.tatsuguchi@hawaii.gov). Please reference file review number 2019-008.

Sincerely,

A handwritten signature in black ink, appearing to read "Jade T. Butay", is written over the "Sincerely," text.

JADE T. BUTAY  
Director of Transportation

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---

July 9, 2019

Kamana'opono M. Crabbe, Ph.D.  
Ka Pouhana, Chief Executive Officer  
State of Hawaii  
Office of Hawaiian Affairs  
560 N. Nimitz Hwy., Suite 200  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Crabbe:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Kamana'opono M. Crabbe, Ph.D. Ka Pouhana, Chief Executive Officer State of Hawaii Office of Hawaiian Affairs
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 20, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
Hawai 'i Administrative Rules (HAR) 11-200-17(f) requires that alternatives be considered in an Environmental Impact Statement (EIS) regardless of cost. PVT only provides "postpone" and "no action" alternatives to the subject parcel location as the EISPN states that the subject parcel is the only land parcel available to PVT. OHA argues that failing to explore other locations as presented in the EISPN leads readers to believe that the only feasible alternative is the proposed action. Essentially, the proposed action in the EISPN has become the preferred and only alternative; thus, creating a potential bias favoring the proposed action that could set the EIS process up for a predetermined outcome before environmental review even begins. Considering that this is the only C&D waste facility available to CCH, the proposed action appears forced upon the CCH with no other viable options to consider. As HAR 11-200-17(f) requires alternatives to be considered regardless of cost, PVT should explore parcel acquisitions or leasing in different locations.	Thank you for your comments and concerns regarding the relocation of the PVT ISWMF. The draft EIS will include an alternatives analysis, including alternative landfill locations identified by the City and County of Honolulu (City). As HAR 11-200-17(f) requires, alternatives will be considered regardless of cost. The City's Department of Environmental Services has commented that if PVT's site is not used, "the City would need to make drastic changes to find a new disposition for the C&D waste stream and incur 'the costs associated with siting, permitting, managing, and operating a public facility', as cited in the EISPN."
OHA further notes that the current C&D facility takes up 200 acres of agricultural zoned land in the Wai'anae district. Relocation to the adjacent subject parcel would mean a total of 379 acres of agricultural zoned land would be consumed by landfill materials and associated landfill operations.	The draft EIS will include a discussion on the agricultural suitability of the Project Site and compatibility with surrounding land uses. The draft EIS will include a description of the history of the Project Site and its uses. The Project Site is not currently used for agriculture, nor has it been

<p>Considering the current PVT C&amp;D parcel is adjacent to what is considered "important agricultural lands", the agricultural potential of the PVT property can never be fully realized. Limiting any agricultural lands by permanently packing them with landfill waste materials is arguably questionable for an island environment and something the CCH should rethink in terms of sustainability.</p>	<p>used for agriculture in the past. The draft EIS will also include a description of the geology at the site. The site does not have soil qualities or growing conditions that support agricultural production of food, fiber, or fuel- and energy-producing crops. The Project Site is not designated as important agricultural lands.</p>
<p>Some members of the local Nanakuli community, comprised of many Native Hawaiians, have consistently argued about the traffic, dust, and view-plane obstruction created by the current C&amp;D operations and expressed concern over the expansion of the current facility that occurred just a few years ago. Utilization of such a large open space for a landfill also goes against policies within the March 2012 Wai'anae Sustainable Communities Plan (SCP) designed to protect large open spaces. Subsistence choices and quality of life become limited for the Nanakuli community with diminishing agricultural lands and expanding landfills in their backyard. OHA thus recommends in fairness that an alternative site seriously be considered as part of the EIS process as the Nanakuli community has brunt the burden of C&amp;D waste coming primarily from more easterly urban parts of O'ahu for many years.</p>	<p>The draft EIS will discuss conformance with the Waianae SCP, specifically the policies pertaining to agricultural lands and open space.</p> <p>The draft EIS will also discuss traffic, dust, and view plane obstruction and describe avoidance and mitigation measures. A project-specific <i>Traffic Impact Analysis Report</i>, <i>Air Quality Study</i>, and Visual Impact Study were prepared for the Proposed Action and will be included in the draft EIS.</p> <p>Please see our comment above related to the alternatives analysis.</p>

RECEIVED

PHONE (808) 594-1888

19 FEB 27 P3:26

FAX (808) 594-1938

DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
560 N. NIMITZ HWY., SUITE 200  
HONOLULU, HAWAII 96817

HRD19-8764B

February 20, 2019

Franz P. Kraintz  
Acting Chief, Community Planning Branch  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawai'i 96813

Re: Environmental Impact Statement Preparation Notice  
PVT Integrated Solid Waste Management Facility Relocation  
Nanakuli Ahupua'a, Wai'anae Moku, O'ahu Moku  
Tax Map Key: (1) 8-7-009: 007

Aloha e Mr. Kraintz:

The Office of Hawaiian Affairs (OHA) is in receipt of your January 23, 2019 letter inviting us to comment on the Environmental Impact Statement Preparation Notice (EISPN) for the PVT Integrated Solid Waste Management Facility Relocation project. Hart Crowser and Pryzm Consulting have been contracted by the project proponent, PVT Land Company Limited (PVT), to complete this EISPN in accordance with Hawai'i Revised Statutes (HRS) Chapter 343. The existing PVT construction and demolition (C&D) waste facility, located on an adjacent 200-acre land parcel off Lualualei Naval Road, is reaching capacity faster than anticipated and thus seeks to relocate current operations to the 179-acre subject land parcel. The existing C&D facility will cease operations per a closure plan and PVT will conduct post-closure care. No alternative site locations are provided within the EISPN for the new facility. As the current facility is the only City & County of Honolulu (CCH) C&D waste facility, closure of the facility would necessitate that the CCH find an alternative site.

Hawai'i Administrative Rules (HAR) 11-200-17(f) requires that alternatives be considered in an Environmental Impact Statement (EIS) regardless of cost. PVT only provides "postpone" and "no action" alternatives to the subject parcel location as the EISPN states that the subject parcel is the only land parcel available to PVT. OHA argues that failing to explore other locations as presented in the EISPN leads readers to believe that the only feasible alternative is the proposed



action. Essentially, the proposed action in the EISPN has become the preferred and only alternative; thus, creating a potential bias favoring the proposed action that could set the EIS process up for a predetermined outcome before environmental review even begins. Considering that this is the only C&D waste facility available to CCH, the proposed action appears forced upon the CCH with no other viable options to consider. As HAR 11-200-17(f) requires alternatives to be considered regardless of cost, PVT should explore parcel acquisitions or leasing in different locations.

OHA further notes that the current C&D facility takes up 200 acres of agricultural zoned land in the Wai'anae district. Relocation to the adjacent subject parcel would mean a total of 379 acres of agricultural zoned land would be consumed by landfill materials and associated landfill operations. Considering the current PVT C&D parcel is adjacent to what is considered "important agricultural lands", the agricultural potential of the PVT property can never be fully realized.<sup>1</sup> Limiting any agricultural lands by permanently packing them with landfill waste materials is arguably questionable for an island environment and something the CCH should rethink in terms of sustainability.

Some members of the local Nanakuli community, comprised of many Native Hawaiians, have consistently argued about the traffic, dust, and view-plane obstruction created by the current C&D operations and expressed concern over the expansion of the current facility that occurred just a few years ago.<sup>2</sup> Utilization of such a large open space for a landfill also goes against policies within the March 2012 *Wai'anae Sustainable Communities Plan* (SCP) designed to protect large open spaces. Subsistence choices and quality of life become limited for the Nanakuli community with diminishing agricultural lands and expanding landfills in their backyard. OHA thus recommends in fairness that an alternative site seriously be considered as part of the EIS process as the Nanakuli community has brunt the burden of C&D waste coming primarily from more easterly urban parts of O'ahu for many years.

OHA looks forward to reviewing the draft EIS and engaging in any further consultation. Should you have any questions, please contact our Compliance Specialist, Kamakana C. Ferreira, at (808) 594-0227, or by email at [kamakanaf@oha.org](mailto:kamakanaf@oha.org).

'O wau iho nō me ka 'oia 'i'o,



Kamana'opono M. Crabbe, Ph.D.  
Ka Pouhana, Chief Executive Officer

KC:kf

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<sup>1</sup> See *O'ahu Important Agricultural Land Mapping Project*, August 2018, produced by the Department of Planning and Permitting.

<sup>2</sup> See September 2015 Final Environmental Impact Statement, *PVT Integrated Solid Waste Management Facility – Expanded Recycling, Landfill Grading, and Renewable Energy Project*.

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July 9, 2019

Leo R. Asuncion  
Planning Program Administrator  
Office of Planning  
State of Hawaii  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawaii 96804

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Asuncion:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

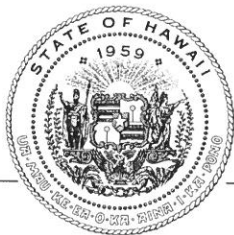
<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Leo R. Asuncion Planning Program Administrator Office of Planning
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 13, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p><u>Special Permit</u> Section 2.3, Project Site Characteristics, page 2-3 of the EISPN lists the project site's parcel size as 179 acres. It also acknowledges that the project is a nonconforming activity within the State Land Use Agricultural District. On page 6-1, Table 6-1, Conformance, the EISPN states that PVT intends to petition the State Land Use Commission (LUC) for a Special Permit, applicable to "unusual and reasonable" uses within the State Agricultural District.</p> <p>We note that pursuant to Hawaii Revised Statutes (HRS) § 205-4.5, permissible uses within the agricultural district, a solid waste disposal and recycling operation is not a permitted use. Therefore, either a Special Permit is required for the proposed unpermitted use within the State Land Use Agricultural District, or a State Land Use District boundary amendment is required to reclassify the current State Land Use Agricultural District to an appropriate land use district that allows the proposed use.</p>	<p>Mahalo for your comment. As stated in the EIS Preparation Notice, PVT intends to petition for a Special Use Permit for the Proposed Action.</p>
<p><u>Stormwater Runoff Management/Low Impact Development (LID)</u> Section 2.5.3 Proposed Construction and Demolition Landfill Design, pages 2-13 and 2-14 of the EISPN include an overview of Storm Water Management strategies to be employed by this project. Pages 2-14 and 2-15 discuss slope stability (to mitigate the potential for soil and foundation movement, and slope failure of the landfill cells), best management practices (BMPs), and engineering controls that will be implemented.</p>	<p>The draft EIS will discuss stormwater management and potential impacts on surface and ground water quality. We will examine the Office of Planning's guidance on Stormwater Impact Assessments and Low Impact Development in drafting the EIS.</p>

<p>Page 2-15 states that the project will incorporate diversion berms, sandbag check dams and similar measures to control and reduce the velocity of storm runoff. The planting of vegetation on bare slopes vulnerable to erosion is consistent with LID design practices. We concur that the Draft Environmental Impact Statement (DEIS) should detail the environmental threats posed by stormwater to the area surrounding the project site, as well as the mitigation that will be used, to safeguard surface water, and downslope coastal and marine resources.</p> <p>To assist in the development of onsite storm water management plans, OP has developed guidance documents on this subject. We recommend consulting these evaluative tools when developing mitigation methods to offset polluted storm runoff. These documents offer useful techniques to keep land-based pollutants and sediment in place, while considering the management practices best suited for the topography, and contaminants potentially affecting nearby water resources. These useful stormwater evaluative tools include:</p> <ul style="list-style-type: none"> <li>• Stormwater Impact Assessments assists in identifying and evaluating information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area: <a href="http://files.hawaii.gov/dbedt/op/czm/initiative/stormwater_impact_assessments_guidance.pdf">http://files.hawaii.gov/dbedt/op/czm/initiative/stormwater_impact_assessments_guidance.pdf</a>; and</li> <li>• Low Impact Development (LID), A Practitioners Guide covers a range of structural BMPs for stormwater control management and layout that minimizes environmental impacts: <a href="http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf">http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf</a></li> </ul>	
<p><u>Hawaii Coastal Zone Management (CZM) Program</u> Table 6.1, Land Use Plans, Policies, and Controls, page 6-1, of the EISPN states that the DEIS will discuss the relationship of the proposed action with the CZM Program.</p> <p>OP agrees that the DEIS should examine the proposed project's consistency with the objectives and supporting policies of the Hawaii CZM Program, HRS§ 205A-2. Compliance with HRS § 205A-2 is a vital component for satisfying the requirements of HRS Chapter 343.</p>	<p>The draft EIS will discuss the Proposed Action's consistency with the objectives and supporting policies of the Hawaii CZM Program, HRS§ 205A-2, as applicable.</p>

<p><u>Hawaii State Planning Act</u> Table 6-1, page 6-1, of the EISPN lists the Hawaii State Planning Act (HRS Chapter 226) and goes on to state that many of the policies are not applicable to the proposed action but is consistent with policies that are relevant.</p> <p>We note that the DEIS should examine the project's relevance with all parts of HRS Chapter 226, the Hawaii State Planning Act. The analysis should examine the project's compatibility with Part I - the goals, objectives, and policies; Part II - planning coordination and implementation (State Functional Plans); and Part III - priority guidelines; or clarify where it is in conflict with them. If any of these provisions are not applicable to this project, the analysis should affirmatively state such determination, followed by discussion paragraphs.</p>	<p>The draft EIS will discuss the Proposed Action's consistency with the objectives and supporting policies of HRS Chapter 226, the Hawaii State Planning Act, as applicable.</p>
<p><u>Sustainability</u> We note that key components proposed by this project are compatible with HRS § 226-108 - the priority guidelines to promote sustainability. These components include the modernization and expansion of recycling operations (e.g., installation of two materials recovery and diversion process lines); and reliance on renewable energy sources to power this facility (e.g., gasification unit and photovoltaic panels). The DEIS should provide greater details on the project's consistency with the principles of sustainability.</p>	<p>The draft EIS will discuss the Proposed Action's consistency with the priority guidelines to promote sustainability, HRS § 226-108, as applicable.</p>





## OFFICE OF PLANNING STATE OF HAWAII

DAVID Y. IGE  
GOVERNOR

DIRECTOR  
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824  
Web: <http://planning.hawaii.gov/>

DTS201902130857NA

February 13, 2019

Mr. Karl Bromwell  
Principal  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Environmental Impact Statement Preparation Notice – PVT Integrated Solid Waste Management Facility Relocation, Nanakuli, Waianae District, Island of Oahu; **File Number 2018/ED-11**  
TMK: (1) 8-7-009: 007

Thank you for the opportunity to provide comments on this Environmental Impact Statement Preparation Notice (EISP) for the relocation of the PVT Land Company (PVT) integrated solid waste management facility. The EISP notification letter was transmitted to our office dated January 23, 2019.

It is our understanding that PVT proposes to relocate its solid waste disposal and recycling operations to a parcel on the opposite side of Lualualei Naval Road, from its current location along the Waianae Coast of Oahu. In addition, this project calls for upgrading of the PVT recycling operations by installing two material recovery and processing lines.

PVT's new facility will rely on renewable energy sources to power its operations. These power sources will include an enclosed gasification unit and solar photovoltaic panels. The goal of this project is to satisfy Oahu's need for construction and demolition landfill and debris management.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. Special Permit

Section 2.3, Project Site Characteristics, page 2-3 of the EISP lists the project site's parcel size as 179 acres. It also acknowledges that the project is a nonconforming activity within the State Land Use Agricultural District. On page 6-1, Table 6-1, Conformance, the EISP states that PVT intends to petition the State Land Use Commission (LUC) for a Special Permit, applicable to "unusual and reasonable" uses within the State Agricultural District.

We note that pursuant to Hawaii Revised Statutes (HRS) § 205-4.5, permissible uses within the agricultural district, a solid waste disposal and recycling operation is not a permitted use. Therefore, either a Special Permit is required for the proposed unpermitted use within the State Land Use Agricultural District, or a State Land Use District boundary amendment is required to reclassify the current State Land Use Agricultural District to an appropriate land use district that allows the proposed use.

2. Stormwater Runoff Management/Low Impact Development (LID)

Section 2.5.3 Proposed Construction and Demolition Landfill Design, pages 2-13 and 2-14 of the EISPN include an overview of Storm Water Management strategies to be employed by this project. Pages 2-14 and 2-15 discuss slope stability (to mitigate the potential for soil and foundation movement, and slope failure of the landfill cells), best management practices (BMPs), and engineering controls that will be implemented.

Page 2-15 states that the project will incorporate diversion berms, sandbag check dams and similar measures to control and reduce the velocity of storm runoff. The planting of vegetation on bare slopes vulnerable to erosion is consistent with LID design practices. We concur that the Draft Environmental Impact Statement (DEIS) should detail the environmental threats posed by stormwater to the area surrounding the project site, as well as the mitigation that will be used, to safeguard surface water, and downslope coastal and marine resources.

To assist in the development of onsite stormwater management plans, OP has developed guidance documents on this subject. We recommend consulting these evaluative tools when developing mitigation methods to offset polluted storm runoff. These documents offer useful techniques to keep land-based pollutants and sediment in place, while considering the management practices best suited for the topography, and contaminants potentially affecting nearby water resources. These useful stormwater evaluative tools include:

- Stormwater Impact Assessments assists in identifying and evaluating information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area:  
[http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater\\_impact/final\\_stormwater\\_impact\\_assessments\\_guidance.pdf](http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_impact/final_stormwater_impact_assessments_guidance.pdf); and
- Low Impact Development (LID), A Practitioners Guide covers a range of structural BMPs for stormwater control management and layout that minimizes environmental impacts:  
[http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid\\_guide\\_2006.pdf](http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf).

3. Hawaii Coastal Zone Management (CZM) Program

Table 6.1, Land Use Plans, Policies, and Controls, page 6-1, of the EISPN states that the DEIS will discuss the relationship of the proposed action with the CZM Program.

OP agrees that the DEIS should examine the proposed project's consistency with the objectives and supporting policies of the Hawaii CZM Program, HRS § 205A-2. Compliance with HRS § 205A-2 is a vital component for satisfying the requirements of HRS Chapter 343.

4. Hawaii State Planning Act

Table 6-1, page 6-1, of the EISPN lists the Hawaii State Planning Act (HRS Chapter 226) and goes on to state that many of the policies are not applicable to the proposed action but is consistent with policies that are relevant.

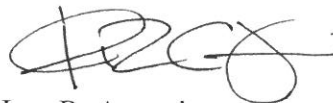
We note that the DEIS should examine the project's relevance with all parts of HRS Chapter 226, the Hawaii State Planning Act. The analysis should examine the project's compatibility with Part I – the goals, objectives, and policies; Part II – planning coordination and implementation (State Functional Plans); and Part III – priority guidelines; or clarify where it is in conflict with them. If any of these provisions are not applicable to this project, the analysis should affirmatively state such determination, followed by discussion paragraphs.

5. Sustainability

We note that key components proposed by this project are compatible with HRS § 226-108 – the priority guidelines to promote sustainability. These components include the modernization and expansion of recycling operations (e.g., installation of two materials recovery and diversion process lines); and reliance on renewable energy sources to power this facility (e.g., gasification unit and photovoltaic panels). The DEIS should provide greater details on the project's consistency with the principles of sustainability.

We have no further comments at this time. If you have any questions regarding this comment letter, please contact Joshua Hekeia of our office at (808) 587-2845.

Sincerely,



Leo R. Asuncion  
Planning Program Administrator II

c: Franz P. Kraintz, City and County of Honolulu, Department of Planning and Permitting

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## ***EISPN Comment Letters and Responses - City and County of Honolulu***

- Board of Water Supply
- Department of Design and Construction
- Department of Environmental Services, Refuse Division
- Department of Facility Maintenance, Division of Road Maintenance
- Department of Parks and Recreation
- Department of Planning and Permitting
- Department of Transportation Services
- Honolulu Fire Department
- Nanakuli-Maili Neighborhood Board No. 36

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July 11, 2019

Ernest Y. W. Lau, P.E.  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96843

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Lau,

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Ernest Y. W. Lau, P.E., Manager and Chief Engineer Board of Water Supply City and County of Honolulu
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	July 1, 2019
<b>Date of Response:</b>	July 11, 2019

Comment	Response
<p>The existing water system cannot provide adequate fire protection to accommodate the proposed development. The Board of Water Supply (BWS) Water System Standards require a fire hydrant to be located fronting the property and provide a fire flow of 4,000 gallons per minute for landfill developments. The nearest fire hydrant, fire hydrant L-00921, is located approximately 370 feet from the property. Therefore, the developer will be required to upgrade approximately 165 feet of the existing 8-inch waterline on Mohihi Street, east of the Mikana Street intersection to a 12-inch waterline, and extend this 12-inch waterline to Lualualei Naval Road and install a fire hydrant fronting Tax Map Key: 8-7-009: 007 with a fire hydrant spacing of 250 feet to provide adequate fire protection in accordance with our Water System Standards. The construction drawings should be submitted to BWS for approval.</p>	<p>The draft EIS will discuss adequate fire protection. PVT coordinates with the Honolulu Fire Department (HFD) with respect to fire protection requirements and would continue to do so for the Proposed Action. Historically, the HFD has been prepared to respond to fires affecting the surface structures, while PVT responds to subsurface landfill fires. PVT would continue to rely on non-potable water sources from on-site wells for fires at the Project Site. No BWS-supplied water would be required for fire protection. PVT would obtain necessary approvals from HFD prior to construction, as needed.</p>
<p>Water pipeline easements shall be granted to the BWS for all water mains to be conveyed to the BWS which are located within private properties and roadways that will not be dedicated to the City/County. All proposed water mains should be located within City right-of-ways, or private streets and roads that are built to City standards and maintained by the City and County of Honolulu in accordance with Chapter 14-32: Maintenance of Private Streets and Roads, Revised Ordinances of Honolulu.</p>	<p>The draft EIS also discusses the proposed water use and supply. Non-potable water would be withdrawn from two wells on the Project Site for dust control and irrigation of salt-tolerant landscaping. Potable water for the Proposed Action would be generated on site from non-potable water using reverse osmosis or provided by the Board of Water Supply (BWS) municipal system. Bottled water would be used for drinking. PVT would coordinate with BWS and obtain necessary approvals if BWS municipal</p>
<p>This development will be required to install separate domestic water meters and laterals serving the agricultural</p>	

<p>and non-agricultural spaces. BWS agricultural water rates are for the irrigation of crops only and requires the submittal of a General Excise tax license to sell produce commercially. An approved backflow preventer is also required after the agricultural meter.</p> <p>When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.</p> <p>The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.</p> <p>The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.</p>	<p>water is used.</p>
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## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
[www.boardofwatersupply.com](http://www.boardofwatersupply.com)



July 1, 2019

KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
KAY C. MATSUI  
RAY C. SOON  
MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio  
JADE T. BUTAY, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer *EW*

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

**Subject: Your Letter Dated January 23, 2019 Requesting Comments on the Environmental Impact Statement Preparation Notice for the PVT Integrated Solid Waste Management Facility Relocation on Lualualei Naval Road, 2018/ED-11 – Tax Map Key: 8-7-009: 007**

Thank you for your letter regarding the proposed waste management facility relocation.

The existing water system cannot provide adequate fire protection to accommodate the proposed development. The Board of Water Supply (BWS) Water System Standards require a fire hydrant to be located fronting the property and provide a fire flow of 4,000 gallons per minute for landfill developments. The nearest fire hydrant, fire hydrant L-00921, is located approximately 370 feet from the property. Therefore, the developer will be required to upgrade approximately 165 feet of the existing 8-inch waterline on Mohihi Street, east of the Mikana Street intersection to a 12-inch waterline, and extend this 12-inch waterline to Lualualei Naval Road and install a fire hydrant fronting Tax Map Key: 8-7-009: 007 with a fire hydrant spacing of 250 feet to provide adequate fire protection in accordance with our Water System Standards. The construction drawings should be submitted to BWS for approval.

Water pipeline easements shall be granted to the BWS for all water mains to be conveyed to the BWS which are located within private properties and roadways that will not be dedicated to the City/County. All proposed water mains should be located within City right-of-ways, or private streets and roads that are built to City standards and maintained by the City and County of Honolulu in accordance with Chapter 14-32: Maintenance of Private Streets and Roads, Revised Ordinances of Honolulu.

This development will be required to install separate domestic water meters and laterals serving the agricultural and non-agricultural spaces. BWS agricultural water rates are for the irrigation of crops only and requires the submittal of a General Excise tax license to sell produce commercially. An approved backflow preventer is also required after the agricultural meter.

Mr. Karl Bromwell  
July 1, 2019  
Page 2

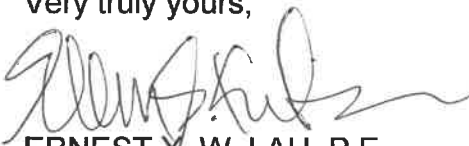
When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,



ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

cc: Franz Kraitz, Department of Planning and Permitting

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July 9, 2019

Robert J. Kroning, P.E., Director  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street, 11<sup>th</sup> Floor  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Director Kroning:

Thank you for your letter regarding the PVT ISWMF Relocation EISPN. We understand that you have no comments at this time.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



ROBERT J. KRONING, P.E.  
DIRECTOR

MARK YONAMINE, P.E.  
DEPUTY DIRECTOR

February 21, 2019

Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard Suite 7-240  
Honolulu, Hawaii 96813

Attn: Karl Bromwell

Dear Mr. Bromwell,

Subject: EIS Preparation Notice for the PVT Integrated Solid Waste Management  
Facility Relocation – Nanakuli, Waianae District, Oahu, Tax Map  
Key: 8-7-009: 007. File Number 2018/ED-11

Thank you for the opportunity to review and comment. The Department of  
Design and Construction has no comments to offer at this time.

Should you have any further questions, please contact me at 768-8480.

Sincerely,

A handwritten signature in black ink, appearing to read "R. M. Kroning", is written over a horizontal line.

Robert J. Kroning, P.E.  
Director

RJK (cf): 758367

cc: Department of Planning and Permitting

July 9, 2019

Manuel Lanuevo, P.E., LEED AP, Chief  
City and County of Honolulu  
Department of Environmental Services  
Refuse Division  
1000 Uluohia St., Suite 201  
Kapolei, Hawaii 96707

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Lanuevo:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Manuel Lanuevo, P.E., LEED AP, Chief City and County of Honolulu Department of Environmental Services Refuse Division
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 14, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
The City and County of Honolulu (City) Department of Environmental Services Refuse Division (Refuse) has reviewed the Environmental Impact Statement Preparation Notice (EISPN) for the PVT Integrated Solid Waste Management Facility (ISWMF) Relocation. Refuse strongly supports development of the new location for the PVT ISWMF.	Thank you for your comments on the PVT ISWMF Relocation project. We have noted that the refuse division strongly supports the relocation of the PVT ISWMF.
In congruence with the EISPN, Refuse recognizes the PVT ISWMF as the only current location for disposal of commercial construction and demolition (C&D) waste. Although the City's landfill, Waimanalo Gulch Sanitary Landfill, is permitted to accept C&D waste, commercial C&D waste is not accepted there per the City's policy. Should the "No Action Alternative" be the determined outcome of the environmental impact statement (EIS) process, the City would need to make drastic changes to find a new disposition for the C&D waste stream and incur "the costs associated with siting, permitting, managing, and operating a public facility", as cited in the EISPN.	<p>The draft EIS will clarify that the PVT ISWMF as the only current location for disposal of commercial C&amp;D debris.</p> <p>We have noted that should the "No Action Alternative" be the determined outcome of the EIS and permitting processes, the City would be responsible for, and incur the costs associated with, siting and operating a new disposal location for C&amp;D debris.</p>
Refuse's one concern about the development of the new location for the PVT ISWMF is the continued use of the facility as an emergency disaster debris management site. The site identified for development in the EISPN is currently planned to be the primary debris	The development of the site will not affect the use of the site as the primary debris management site in the event of a large-scale disaster. As the site is developed, it will be staged so that disaster debris can be accepted in an emergency. As you note, the draft EIS will explain that the Proposed

<p>management site in the event of a large-scale disaster. In discussing this use with Hart Crowser, the development of the site does not appear to affect the ability for the site to serve this purpose.</p> <p>This concern is further alleviated by language in the EISPN recognizing this critical function, such as, "The proposed project will satisfy Oahu's continued need for construction and demolition landfill and disaster debris processing.", and, "PVT ISWMF also serves as the landfill disposal site for emergency disaster debris". However, should this change, please make the requisite changes in the EIS and notify the City.</p>	<p>Action will satisfy Oahu's continued need for construction and demolition processing and disposal and that PVT ISWMF also serves as the disposal site for emergency disaster debris.</p>
<p>Refuse would also like to mention that it commends PVT Land Company Limited's efforts to make the new facility as sustainable as possible, with the use of solar photovoltaic panels and inclusion of a gasification facility for organic wastes to generate sufficient energy to operate the facility.</p>	<p>Thank you for your commendation and support for the renewable energy component of the Proposed Action.</p>

DEPARTMENT OF ENVIRONMENTAL SERVICES  
**CITY AND COUNTY OF HONOLULU**

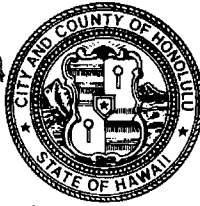
REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707  
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

RECEIVED

KIRK CALDWELL  
MAYOR

19 FEB 15 P4:14



DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU  
February 14, 2019

LORI M.K. KAHIKINA, P.E.  
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP  
CHIEF

IN REPLY REFER TO:  
RE 19-014

Franz Kraintz  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Kraintz:

Subject: Comments on PVT Integrated Solid Waste Management Facility  
Environmental Impact Statement Preparation Notice

The City and County of Honolulu (City) Department of Environmental Services Refuse Division (Refuse) has reviewed the Environmental Impact Statement Preparation Notice (EISPN) for the PVT Integrated Solid Waste Management Facility (ISWMF) Relocation. Refuse strongly supports development of the new location for the PVT ISWMF.

In congruence with the EISPN, Refuse recognizes the PVT ISWMF as the only current location for disposal of commercial construction and demolition (C&D) waste. Although the City's landfill, Waimanalo Gulch Sanitary Landfill, is permitted to accept C&D waste, commercial C&D waste is not accepted there per the City's policy. Should the "No Action Alternative" be the determined outcome of the environmental impact statement (EIS) process, the City would need to make drastic changes to find a new disposition for the C&D waste stream and incur "the costs associated with siting, permitting, managing, and operating a public facility", as cited in the EISPN.

Refuse's one concern about the development of the new location for the PVT ISWMF is the continued use of the facility as an emergency disaster debris management site. The site identified for development in the EISPN is currently planned to be the primary debris management site in the event of a large scale disaster. In discussing this use with Hart Crowser, the development of the site does not appear to affect the ability for the site to serve this purpose.



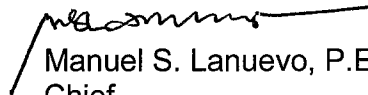
Franz Kraintz  
February 14, 2019  
Page 2

This concern is further alleviated by language in the EISPN recognizing this critical function, such as, "The proposed project will satisfy Oahu's continued need for construction and demolition landfill and disaster debris processing.", and, "PVT ISWMF also serves as the landfill disposal site for emergency disaster debris". However, should this change, please make the requisite changes in the EIS and notify the City.

Refuse would also like to mention that it commends PVT Land Company Limited's efforts to make the new facility as sustainable as possible, with the use of solar photovoltaic panels and inclusion of a gasification facility for organic wastes to generate sufficient energy to operate the facility.

Thank you for the opportunity to comment on the EISPN. Please direct any questions to Mr. Josh Nagashima at [josh.nagashima@honolulu.gov](mailto:josh.nagashima@honolulu.gov) or 768-3430.

Sincerely,

  
Manuel S. Lanuevo, P.E., LEED AP  
Chief

cc: Josh Nagashima

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July 9, 2019

Sindy Mostoles  
City and County of Honolulu  
Department of Facility Maintenance  
Division of Road Maintenance  
1000 Uluohia St.  
Kapolei, Hawaii 96707

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Mostoles:

Thank you for your letter regarding the PVT ISWMF Relocation EISPN. We understand that you have no comments at this time.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## Kraintz, Franz

---

**From:** Mostoles, Sindy S  
**Sent:** Tuesday, February 05, 2019 2:00 PM  
**To:** Kraintz, Franz  
**Subject:** EISPN FOR THE PVT INTEGRATED SOLID WASTE MANAGEMENT FACILITY RELOCATION, NANAKULI, TMK: 7-7-009:007

Hi Frank,

Thanks for the opportunity to review and give our input on the subject Project. We have no comments at this time, as we do not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Thanks,  
Sindy  
DFM - Division of Road Maintenance  
768-3600

July 9, 2019

Michele Nekota  
Director  
City and County of Honolulu  
Department of Parks and Recreation  
1000 Uluohia St., Suite 309  
Kapolei, Hawaii 96707

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Director Nekota:

Thank you for your letter regarding the PVT ISWMF Relocation EISPN. We understand that you have no comments at this time.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

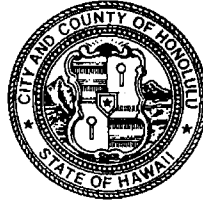


**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF PARKS & RECREATION  
**CITY AND COUNTY OF HONOLULU**

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707  
Phone: (808) 768-3003 • Fax: (808) 768-3053  
Website: www.honolulu.gov

RECEIVED



KIRK CALDWELL  
MAYOR

19 JAN 29 P2:19

MICHELE K. NEKOTA  
DIRECTOR

DEPT OF PLANNING AND PERMITTING  
CITY & COUNTY OF HONOLULU  
JEANNE C. ISHIKAWA  
DEPUTY DIRECTOR

January 25, 2019

**MEMORANDUM**

TO: Kathy Sokugawa, Acting Director  
Department of Planning and Permitting

FROM: Michele K. Nekota  
Director

A handwritten signature in black ink, appearing to read "Michele K. Nekota", is written over the printed name and title.

SUBJECT: Environmental Impact Statement Preparation Notice for the PVT Integrated  
Solid Waste Management Facility Relocation-Nanakuli, Waianae District  
Tax Map Key: 8-7-009: 007

Thank you for the opportunity to review and comment on the subject EIS  
Preparation Notice for the PVT Integrated Waste Management Facility Relocation.

The Department of Parks and Recreation has no comment.

Should you have any questions, please contact John Reid, Planner, at 768-3017.

MKN:jr  
(758376)



July 9, 2019

Kathy Sokugawa  
Acting Director  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Sokugawa,

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Kathy Sokugawa, Acting Director City and County of Honolulu Department of Planning and Permitting
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	March 6, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
1. The draft Environmental Impact Statement (EIS) should provide a more in-depth narrative about how the proposed use does or does not conform to Hawaii Revised Statutes, Chapter 205. If it does not conform, then the draft EIS should outline the possible alternatives for bringing the Project into conformance with Chapter 205.	The draft EIS will discuss conformance of the Proposed Action with Hawaii Revised Statutes, Chapter 205.
2. The site of the proposed development is within the Waianae Sustainable Communities Plan (SCP) area and is intended for agricultural and other uses that are compatible with a rural landscape and country lifestyle. Section 6.0 and Table 6-1 briefly state how the Project conforms with the Waianae SCP. However, the draft EIS should go into a greater discussion about how the Project is consistent with the Waianae SCP, specifically the policies pertaining to agricultural lands (Section 3.7.2).	The draft EIS will discuss conformance of the Proposed Action with the Waianae SCP, specifically the policies pertaining to agricultural lands.

<p>3. The Waianae SCP states that almost every valley in the Waianae SCP area contains extensive cultural sites (Section 3.6.1), therefore, a complete archaeological survey of the Project site should be included in the draft EIS.</p>	<p>Cultural Surveys Hawaii has completed four archaeological studies of the Project Site:</p> <ul style="list-style-type: none"> <li>• <i>Archaeological Literature Review and Field Inspection Report for the PVT Integrated Solid Waste Management Facility Relocation Project, November 2018</i></li> <li>• <i>Addendum to Archaeological Inventory Survey of 200 Acres for the Proposed Nanakuli B Site Materials Recovery Facility and Landfill, February 2008</i></li> <li>• <i>Preservation Plan for State Inventory of Historic Properties #50-80-08-6699, December 2007</i></li> <li>• <i>Archaeological Inventory Survey of 200 Acres for the Proposed Nanakuli B Site Materials Recovery Facility and Landfill, January 2006</i></li> </ul> <p>These studies will be summarized and discussed in the draft EIS.</p>
<p>4. The draft EIS should discuss compliance with Land Use Ordinance (LUO) requirements in greater detail, rather than relying merely on Table 2-2, the AG-2 General Agricultural District Development Standards Summary on page 2-12.</p>	<p>The draft EIS will discuss compliance of the Proposed Action with applicable LUO requirements.</p>
<p>5. The LUO classifies landfills as waste disposal and processing, which requires a Conditional Use Permit (CUP) major in the AG-2 General Agricultural District. Please add a CUP major to the list of required permits. The generator and the photovoltaic system are accessory facilities that will be used to power the operations.</p>	<p>The draft EIS will include an updated list of permits and approvals and will include a CUP Major unless it is determined in consultation with Department of Planning and Permitting (DPP) that it is not necessary.</p>

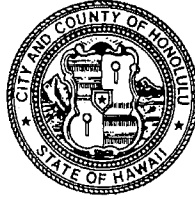
<p>6. Section 2.5.2 of the EISPN states that a 750-foot buffer between the nearest residential area and the active disposal area would comply with LUO Section 21-5.680. However, Section 21-5:680 requires a 1,500-foot buffer between the processing facility and any Country, Residential, Apartment, Apartment Mixed Use, or Resort Districts. The LUO refers to the facility and does not specify only the active disposal area. If impacts are sufficiently mitigated, the distance may be reduced to as little as 500 feet. The same rule applies to the biofuel processing facility (LUO Section 21-5.80A). The draft EIS should demonstrate compliance with this section.</p>	<p>The draft EIS will discuss compliance of the Proposed Action with LUO Section 21-5.680 and LUO Section 21-5.80A.</p>
<p>7. The draft EIS should describe the same buffer zone for the existing site, describe any complaints received from neighbors, and explain how those complaints were addressed.</p>	<p>The draft EIS will describe the 750-foot buffer zone for the existing site.</p> <p>The most common complaints from neighbors are related to fugitive dust, truck traffic, speeding, and noise. The draft EIS will discuss existing conditions and potential impacts of the Proposed Action on these resources. The draft EIS will also include a project-specific <i>Air Quality Impact Report</i>, <i>Traffic Impact Assessment Report</i>, and <i>Environmental Noise Assessment Report</i>.</p> <p>PVT will continue to have a hotline so that neighbors can contact them with concerns. PVT promptly investigates and responds to complaints.</p>
<p>8. The draft EIS should demonstrate compliance with the parking and loading requirements of the LUO, Article 6.</p>	<p>The draft EIS will discuss compliance of the Proposed Action with the applicable provisions of LUO Article 6.</p>
<p>9. The EIS must be processed before a Special Use Permit and CUP applications can be accepted for processing.</p>	<p>It is noted that notice of the final EIS must be published in the Environmental Notice before the Special Use Permit and CUP applications can be accepted by DPP.</p>
<p>10. The draft EIS should clearly explain all ongoing uses on the property containing</p>	<p>The draft EIS will discuss the ongoing uses on the existing PVT ISMWF property and when those</p>

<p>the existing landfill, provide a timeline that shows which uses will be closed and at what time, and clearly identify the uses that will continue the property indefinitely. The EISPN states that the closed landfill will "generally" be maintained as open space and that, "The existing administrative area will be maintained as a headquarters for managing post-closure activities." The draft EIS should consider relocating all operations to the property containing the new landfill and more definitively ensure that the site of the current landfill will be maintained as open space.</p>	<p>operations would be relocated to the Project Site.</p> <p>Some auxiliary facilities will be needed at the PVT ISWMF site to manage post-closure activities.</p>
<p>11. The draft EIS should describe in more detail how the two operations, i.e., the existing site and new site are going to function, either independently or as one unit. For example, will the two operations require frequent truck and equipment movements across Lualualei Road, or will each side be self-contained and autonomous?</p>	<p>The draft EIS will discuss the timeline and phasing for the Proposed Action.</p> <p>Each site will be self-contained and autonomous once the existing PVT ISWMF construction and demolition (C&amp;D) landfill reaches capacity and operations are relocated to the Project Site. Post-closure operations that will remain at the PVT ISWMF will be detailed in the draft EIS. Once the relocation is complete, there will be little to no truck and equipment movements across Lualualei Naval Road.</p>
<p>12. The draft EIS should consider the possibility of capping the existing landfill with cover that would support more than just shallow rooted vegetation, thereby mitigating the loss of natural resources and providing more beneficial uses to the environment.</p>	<p>The HDOH's Solid Waste Rules and PVT's Solid Waste Management Permit dictate landfill closure and post-closure requirements. Deep rooted vegetation is not permitted as it has the potential to pierce or compromise the protective landfill cap.</p>
<p>13. The subject property is not serviced by the municipal wastewater system. Private wastewater systems are under the jurisdiction of the State Department of Health, Wastewater Branch. Please add individual wastewater system permits to the list of permits and approvals required for this Project.</p>	<p>The draft EIS will included an updated list of permits and approvals and include the individual wastewater system permits.</p>

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.dpp.org](http://www.honolulu.dpp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



KATHY K. SOKUGAWA  
ACTING DIRECTOR

TIMOTHY F. T. HIU  
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI  
DEPUTY DIRECTOR

2018/ED-11(FK)

March 6, 2019

Mr. Karl Bromwell  
Principal  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

SUBJECT: Environmental Impact Statement Preparation Notice for the PVT  
Integrated Solid Waste Management Facility Relocation-Nanakuli,  
Waianae District, Oahu  
Tax Map Key: 8-7-009: 007

We have reviewed the Environmental Impact Statement Preparation Notice (EISPN) in the January 23, 2019 edition of the Environmental Notice for the PVT Integrated Solid Waste Management Facility Relocation ("Project") in Nanakuli, Waianae, District of Oahu. The City and County of Honolulu, Department of Planning and Permitting (DPP), offers the following comments:

1. The draft Environmental Impact Statement (EIS) should provide a more in-depth narrative about how the proposed use does or does not conform to Hawaii Revised Statutes, Chapter 205. If it does not conform, then the draft EIS should outline the possible alternatives for bringing the Project into conformance with Chapter 205.
2. The site of the proposed development is within the Waianae Sustainable Communities Plan (SCP) area and is intended for agricultural and other uses that are compatible with a rural landscape and country lifestyle. Section 6.0 and Table 6-1 briefly state how the Project conforms with the Waianae SCP. However, the draft EIS should go into a greater discussion about how the Project is consistent with the Waianae SCP, specifically the policies pertaining to agricultural lands (Section 3.7.2).



3. The Waianae SCP states that almost every valley in the Waianae SCP area contains extensive cultural sites (Section 3.6.1), therefore, a complete archaeological survey of the Project site should be included in the draft EIS.
4. The draft EIS should discuss compliance with Land Use Ordinance (LUO) requirements in greater detail, rather than relying merely on Table 2-2, the AG-2 General Agricultural District Development Standards Summary on page 2-12.
5. The LUO classifies landfills as waste disposal and processing, which requires a Conditional Use Permit (CUP) major in the AG-2 General Agricultural District. Please add a CUP major to the list of required permits. The generator and the photovoltaic system are accessory facilities that will be used to power the operations.
6. Section 2.5.2 of the EISPN states that a 750-foot buffer between the nearest residential area and the active disposal area would comply with LUO Section 21-5.680. However, Section 21-5.680 requires a 1,500-foot buffer between the processing facility and any Country, Residential, Apartment, Apartment Mixed Use, or Resort Districts. The LUO refers to the facility as a whole and does not specify only the active disposal area. If impacts are sufficiently mitigated, the distance may be reduced to as little as 500 feet. The same rule applies to the biofuel processing facility (LUO Section 21-5.80A). The draft EIS should demonstrate compliance with this section.
7. The draft EIS should describe the same buffer zone for the existing site, describe any complaints received from neighbors, and explain how those complaints were addressed.
8. The draft EIS should demonstrate compliance with the parking and loading requirements of the LUO, Article 6.
9. The EIS must be processed before a Special Use Permit and CUP applications can be accepted for processing.
10. The draft EIS should clearly explain all ongoing uses on the property containing the existing landfill, provide a timeline that shows which uses will be closed and at what time, and clearly identify the uses that will continue on the property indefinitely. The EISPN states that the closed landfill will "generally" be maintained as open space and that, "The existing administrative area will be maintained as a headquarters for managing post-closure activities." The draft EIS should consider relocating all operations to the property containing the new landfill and more definitively ensure that the site of the current landfill will be maintained as open space.
11. The draft EIS should describe in more detail how the two operations, i.e., the existing site and new site are going to function, either independently or as one

Mr. Karl Bromwell  
March 6, 2019  
Page 3

unit. For example, will the two operations require frequent truck and equipment movements across Lualualei Road or will each side be self-contained and autonomous?

12. The draft EIS should consider the possibility of capping the existing landfill with cover that would support more than just shallow rooted vegetation, thereby mitigating the loss of natural resources and providing more beneficial uses to the environment.
13. The subject property is not serviced by the municipal wastewater system. Private wastewater systems are under the jurisdiction of the State Department of Health, Wastewater Branch. Please add individual wastewater system permits to the list of permits and approvals required for this Project.

Should you have any questions, please contact Franz Krintz, at 768-8046, or Dina Wong, at 768-8053.

Very truly yours,

A handwritten signature in black ink, appearing to read "Kathy Sokugawa", written in a cursive style.

Kathy K. Sokugawa  
Acting Director

KKS:ah

July 9, 2019

Wes Frysztacki  
Director  
City and County of Honolulu  
Department of Transportation Services  
650 South King Street, 3<sup>rd</sup> Floor  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Frysztacki,

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Wes Frysztacki, Director City and County of Honolulu Department of Transportation Services
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 28, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p><b>1. Transportation Impact.</b> The following comments are related to transportation impacts:</p> <ul style="list-style-type: none"> <li>a. <b>Transportation Assessment.</b> Provide a Transportation Assessment (TA) in the draft environmental impact statement (DEIS) that analyzes the need for street typologies, traffic control devices, transportation demand management strategies, streetscape and intersection improvements that encourage walking, bicycling, and transit use for employees of the proposed project.</li> <li>i. Use person trips instead of vehicle trip rates from the ITE Trip Generation Manual and assign these trips to the transportation system. This will require analysis of crossing treatments using NCHRP 562 methodology for pedestrian measures.</li> <li>ii. The following performance measures still need to be addressed in this study: <ul style="list-style-type: none"> <li>1. V/C ratio targets that are &gt;1 for 1st and/or 2nd highest peak hours</li> <li>2. Identify where vehicle Level of Service (LOS) will not be used</li> <li>3. Pedestrian Level-of-Service (LOS)</li> <li>4. Bicycle Level of Traffic Stress (LTS)</li> <li>5. Transit Capacity and Quality of Service (TCQSM)</li> </ul> </li> </ul>	<p>The draft EIS will discuss potential impacts of the Proposed Action on traffic and transportation.</p> <p>A project-specific <i>Traffic Impact Analysis Report</i> (TIAR) was prepared and complies with the DTS recommendations listed, as applicable.</p> <ul style="list-style-type: none"> <li>i. Site-specific trip generation rates were developed from the existing PVT ISWMF in Nanakuli, Hawaii. The site-specific trip generation rates were developed by correlating the total vehicle trip generation data with the number of employees, i.e., vehicle trips per hour (vph) per employee (TIAR Section I.C.2.). In general practice, site-specific trip generation characteristics are preferred over the ITE rates, when available.</li> <li>ii. The vehicle LOS is used throughout the TIAR. The field investigation indicated that the pedestrian traffic to and from the PVT ISWMF was minimal. It was assumed that the pedestrian traffic between the PVT ISWMF and TheBus stops indicated low transit usage, as well. Bicycle</li> </ul>

<ul style="list-style-type: none"> <li>iii. In addition to the calculated LOS, the observational LOS should be provided.</li> <li>iv. Please provide observed bicycle and pedestrian counts to Department of Transportation Services (DTS) in the Department's standard format. Contact Byron Nakamura, Traffic Technician of the Special Plans Branch at <a href="mailto:bnakamura@honolulu.gov">bnakamura@honolulu.gov</a> to obtain the Traffic Count Summary Reporting instructions and template.</li> <li>v. Please contact Nicola Szibbo of the Regional Planning Branch at <a href="mailto:nicola.szibbo@honolulu.gov">nicola.szibbo@honolulu.gov</a> to obtain the above multimodal transportation assessment tools.</li> <li>vi. Please contact David Wade of the Oahu MPO at <a href="mailto:david.wade@oahumpo.org">david.wade@oahumpo.org</a> for access to the latest Regional Travel Demand Model (Version 6, 2015) for the transportation assessment.</li> </ul>	<p>traffic to and from the PVT ISWMF also was minimal. The expected use of the non-automobile modes of travel are not expected to be significant. Therefore, the TIAR does not include a multi-modal capacity analysis (TIAR Section I.C.3.).</p> <ul style="list-style-type: none"> <li>iii. The Highway Capacity Manual calculations were confirmed by comparing the calculated queues with the observed queues.</li> <li>iv. The bicycle and pedestrian count data will be attached in Appendix A of the TIAR.</li> </ul>
<p><b>2. Complete Streets.</b> The following comments are related to Complete Streets:</p> <ul style="list-style-type: none"> <li>a. <b>Consistency with Complete Streets Policies.</b> The DEIS should contain a discussion of compliance with County and State Complete Streets policies, pursuant to Act 54, Session Laws of Hawaii 2009, HRS §264-20.5 and ROH 12-15. The Project should elaborate on how it will comply with Complete Streets policies, including specific adherence to the following key Complete Streets principles: 1) safety; 2) Context Sensitive Solutions; 3) accessibility and mobility for all; 4) use and comfort of all users; 5) consistency of design guidelines and standards; 6) energy efficiency; 7) health; and 8) green infrastructure.</li> <li>b. <b>Complete Streets Improvements.</b> The DEIS should evaluate whether improvements and facilities are needed to aid vehicular, pedestrian, bicycle and public transportation circulation by implementing Complete Streets principles. To the extent practicable, the design of the project should be consistent with the City's Complete Streets ordinance, assign street typologies, and include features to encourage walking, bicycling and public transit.</li> </ul>	<p>The draft EIS will discuss potential impacts of the Proposed Action on traffic and transportation. The Proposed Action will be consistent with City and County of Honolulu and State Complete Streets policies, as applicable. Improvements and facilities to aid vehicular, pedestrian, bicycle and public transportation are not proposed as they are not applicable to the Proposed Action.</p>

3. **Construction Impacts.** The following comments are related to short-term construction impacts:

- a. **Traffic Management Plan (TMP).** The DEIS should include a Traffic Management Plan, which discusses traffic impacts the project may have on any surrounding City roadways, including short-term impacts during construction and long-term impacts after construction with corresponding measures to mitigate these impacts by applying Complete Streets principles.
- b. **Best Practice TMPs.** Best practice TMPs provide the City with information by which to monitor construction areas. The City will require cameras where sidewalks are closed to help assess effectiveness of management.
- c. **Joint TMP Review.** The TMP shall be jointly reviewed and accepted by the City's Department of Transportation Services and the Department of Planning and Permitting.
- d. **Construction Materials and Equipment.** Construction materials and equipment should be transferred to and from the project site during off-peak traffic hours 8:30 a.m. to 3:30 p.m. to minimize any possible disruption to traffic on the local streets.
- e. **Safety Measures for Existing Access.** Any existing pedestrian, bicycle and vehicle access/crossing will be maintained with the highest safety measures during construction. Pedestrian detour routes should be established around construction activities situated within the sidewalk area. These detour routes should be located adjacent to or near the property line and near to the bus stop. For example, if a conduit line installation takes place within the sidewalk area, then the pedestrian detour route can be located within the project's property. In this way, the pedestrian does not have to travel a far distance or round-about path to get to the bus stop. Pedestrian detour plans shall be submitted to the DTS Transportation Planning Division (TPD) for review and approval.
- f. **Best Management Practice Controls.** Best Management Practice controls should be included at construction site to prevent trailing of dirt and debris on City roadways.
- g. **Americans with Disabilities Act (ADA)**

The Proposed Action is not anticipated to have short-term construction impacts on ground transportation or traffic. PVT will work with the Navy to ensure no adverse impacts to Lualualei Naval Road.



<p><b>Requirements.</b> Any damage to the existing roadway that is caused by the project should be repaired to current City standards as well as meet Americans with Disabilities Act requirements.</p> <p>h. <b>Neighborhood Impacts.</b> The area Neighborhood Board, as well as the area businesses, emergency personnel (fire, ambulance and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details of the proposed project and the impacts that the project may have on the adjoining local street area network.</p> <p>i. <b>Street Usage Permits.</b> A street usage permit from the City's Department of Transportation Services should be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street.</p> <p>j. <b>Public Transit Service Area.</b> The project is in an existing public transit service area. To ensure that the project development does not affect public transit services (bus operations, bus routes, bus stops and para-transit operations); submit project plans to DTS - Public Transit Division (PTO) for review and approval. Contact DTS-PTD at 768-8396, 768-8370, 769-8374 or <a href="mailto:TheBusStop@honolulu.gov">TheBusStop@honolulu.gov</a>.</p>	
<p><b>4. Sea Level Rise and Resilience.</b> Infrastructure improvements located within areas potentially exposed to chronic flooding with sea level rise shall be subject to an in-depth analysis of the potential impacts of sea level rise on elevation, tolerance for risk, and the lifetime of the proposed structure or infrastructure. Any significant improvements within existing footprints should be dependent on established, resilient design guidelines, or otherwise be subject to relocation to a more suitable area.</p> <p>The potential for chronic flooding with 3.2 feet of sea level rise (SLR-XA) shall be used as the vulnerability zone for planning purposes. Maps of the project area shall be provided for both the SLR-XA and flooded highways. The applicant shall recommend strategies and designs that increase the flood resiliency for new development or improvements within the SLR-XA that cannot be relocated, or seek opportunities to plan new development or projects well landward of the SLR-XA. See the following to determine vulnerability:  <a href="http://www.pacioos.hawaii.edu/shoreline/slr-hawaii">http://www.pacioos.hawaii.edu/shoreline/slr-hawaii</a>.</p>	<p>The draft EIS will discuss potential impacts of sea level rise on the Proposed Action. The Hawaii Sea Level Rise Viewer (<a href="http://www.pacioos.hawaii.edu/shoreline/slr-hawaii">http://www.pacioos.hawaii.edu/shoreline/slr-hawaii</a>) indicates that the Proposed Action is outside the sea level rise exposure area and is not at risk of passive or high wave flooding with 3.2 feet of sea level rise (SLR-XA).</p>

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL  
MAYOR



19 MAR 20 P1:25

WES FRYSZTACKI  
DIRECTOR

JON Y. NOUCHI  
DEPUTY DIRECTOR

DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU

TP2/19-759704R

February 28, 2019

**MEMORANDUM**

TO: Kathy Sokugawa, Acting Director  
Department of Planning and Permitting

ATTENTION: Franz Krintz, Acting Branch Chief  
Department of Planning and Permitting

FROM:   
Wes Frysztacki, Director  
Department of Transportation Services

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) for the  
PVT Integrated Solid Waste Management Facility Relocation in  
Nanakuli, Oahu

Thank you for the opportunity to provide comments on the EISPN for the PVT Integrated Solid Waste Management Facility Relocation. In response to your letter dated January 23, 2019 we have the following comments:

1. **Transportation Impact.** The following comments are related to transportation impacts:
  - a. **Transportation Assessment.** Provide a Transportation Assessment (TA) in the draft environmental impact statement (DEIS) that analyzes the need for street typologies, traffic control devices, transportation demand management strategies, streetscape and intersection improvements that encourage walking, bicycling, and transit use for employees of the proposed project.

- i. Use person trips instead of vehicle trip rates from the ITE Trip Generation Manual and assign these trips to the transportation system. This will require analysis of crossing treatments using NCHRP 562 methodology for pedestrian measures.
  - ii. The following performance measures still need to be addressed in this study:
    1. V/C ratio targets that are >1 for 1<sup>st</sup> and/or 2<sup>nd</sup> highest peak hours
    2. Identify where vehicle Level of Service (LOS) will not be used
    3. Pedestrian Level-of-Service (LOS)
    4. Bicycle Level of Traffic Stress (LTS)
    5. Transit Capacity and Quality of Service (TCQSM)
  - iii. In addition to the calculated LOS, the observational LOS should be provided.
  - iv. Please provide observed bicycle and pedestrian counts to Department of Transportation Services (DTS) in the Department's standard format. Contact Byron Nakamura, Traffic Technician of the Special Plans Branch at [bnakamura@honolulu.gov](mailto:bnakamura@honolulu.gov) to obtain the Traffic Count Summary Reporting instructions and template.
  - v. Please contact Nicola Szibbo of the Regional Planning Branch at [nicola.szibbo@honolulu.gov](mailto:nicola.szibbo@honolulu.gov) to obtain the above multimodal transportation assessment tools.
  - vi. Please contact David Wade of the OahuMPO at [david.wade@oahumpo.org](mailto:david.wade@oahumpo.org) for access to the latest Regional Travel Demand Model (Version 6, 2015) for the transportation assessment.
2. **Complete Streets.** The following comments are related to Complete Streets:
- a. **Consistency with Complete Streets Policies.** The DEIS should contain a discussion of compliance with County and State Complete Streets policies, pursuant to Act 54, Session Laws of

Hawaii 2009, HRS §264-20.5 and ROH 12-15. The Project should elaborate on how it will comply with Complete Streets policies, including specific adherence to the following key Complete Streets principles: 1) safety; 2) Context Sensitive Solutions; 3) accessibility and mobility for all; 4) use and comfort of all users; 5) consistency of design guidelines and standards; 6) energy efficiency; 7) health; and 8) green infrastructure.

- b. **Complete Streets Improvements.** The DEIS should evaluate whether improvements and facilities are needed to aid vehicular, pedestrian, bicycle and public transportation circulation by implementing Complete Streets principles. To the extent practicable, the design of the project should be consistent with the City's Complete Streets ordinance, assign street typologies, and include features to encourage walking, bicycling and public transit.
- 3. **Construction Impacts.** The following comments are related to short-term construction impacts:
  - a. **Traffic Management Plan (TMP).** The DEIS should include a Traffic Management Plan, which discusses traffic impacts the project may have on any surrounding City roadways, including short-term impacts during construction and long-term impacts after construction with corresponding measures to mitigate these impacts by applying Complete Streets principles.
  - b. **Best Practice TMPs.** Best practice TMPs provide the City with information by which to monitor construction areas. The City will require cameras where sidewalks are closed to help assess effectiveness of management.
  - c. **Joint TMP Review.** The TMP shall be jointly reviewed and accepted by the City's Department of Transportation Services and the Department of Planning and Permitting.
  - d. **Construction Materials and Equipment.** Construction materials and equipment should be transferred to and from the project site during off-peak traffic hours 8:30 a.m. to 3:30 p.m. to minimize any possible disruption to traffic on the local streets.

- e. **Safety Measures for Existing Access.** Any existing pedestrian, bicycle and vehicle access/crossing will be maintained with the highest safety measures during construction. Pedestrian detour routes should be established around construction activities situated within the sidewalk area. These detour routes should be located adjacent to or near the property line and near to the bus stop. For example, if a conduit line installation takes place within the sidewalk area, then the pedestrian detour route can be located within the project's property. In this way, the pedestrian does not have to travel a far distance or round-about path to get to the bus stop. Pedestrian detour plans shall be submitted to the DTS Transportation Planning Division (TPD) for review and approval.
- f. **Best Management Practice Controls.** Best Management Practice controls should be included at construction site to prevent trailing of dirt and debris on City roadways.
- g. **Americans with Disabilities Act (ADA) Requirements.** Any damage to the existing roadway that is caused by the project should be repaired to current City standards as well as meet Americans with Disabilities Act requirements.
- h. **Neighborhood Impacts.** The area Neighborhood Board, as well as the area businesses, emergency personnel (fire, ambulance and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details of the proposed project and the impacts that the project may have on the adjoining local street area network.
- i. **Street Usage Permits.** A street usage permit from the City's Department of Transportation Services should be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street.
- j. **Public Transit Service Area.** The project is in an existing public transit service area. To ensure that the project development does not affect public transit services (bus operations, bus routes, bus stops and para-transit operations); submit project plans to DTS – Public Transit Division (PTD) for review and approval. Contact DTS-PTD at 768-8396, 768-8370, 769-8374 or TheBusStop@honolulu.gov.

4. **Sea Level Rise and Resilience.** Infrastructure improvements located within areas potentially exposed to chronic flooding with sea level rise shall be subject to an in-depth analysis of the potential impacts of sea level rise on elevation, tolerance for risk, and the lifetime of the proposed structure or infrastructure. Any significant improvements within existing footprints should be dependent on established, resilient design guidelines, or otherwise be subject to relocation to a more suitable area.

The potential for chronic flooding with 3.2 feet of sea level rise (SLR-XA) shall be used as the vulnerability zone for planning purposes. Maps of the project area shall be provided for both the SLR-XA and flooded highways. The applicant shall recommend strategies and designs that increase the flood resiliency for new development or improvements within the SLR-XA that cannot be relocated, or seek opportunities to plan new development or projects well landward of the SLR-XA. See the following to determine vulnerability: <http://www.pacioos.hawaii.edu/shoreline/slr-hawaii>.

We reserve the right to further comment pending review of the DEIS.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Nicola Szibbo of my staff at 768-8359.



July 9, 2019

Socrates Bratakos  
Assistant Chief  
City and County of Honolulu  
Honolulu Fire Department  
636 South Street  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISMWF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Bratakos:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Socrates Bratakos, Assistant Chief City and County of Honolulu Honolulu Fire Department
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 14, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p>1. 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 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)</p> <p>A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)</p>	<p>The draft EIS will discuss fire protection and compliance of the Proposed Action with applicable NFPA regulations, including NFPA 1, 2012 Edition, Sections 18.2.3.2.2, 18.2.3.2.2.1, and 18.2.3.2.1.</p>
<p>2. 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 from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or</p>	<p>The draft EIS will discuss compliance of the Proposed Action with applicable NFPA regulations, including NFPA 1, 2012 Edition, Section 18.3.1, as amended.</p>

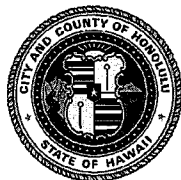
<p>building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)</p>	
<p>3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)</p>	<p>The draft EIS will discuss compliance of the Proposed Action with applicable NFPA regulations, including NFPA 1, 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.</p>
<p>4. Submit civil drawings to the HFD for review and approval.</p>	<p>PVT will submit civil drawings to Honolulu Fire Department for review, as needed.</p>

PD

HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

RECEIVED  
19 FEB 20 08:00  
DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU

February 14, 2019

TO: KATHY SOKUGAWA, ACTING DIRECTOR  
DEPARTMENT OF PLANNING AND PERMITTING

ATTN: FRANZ KRAINTZ, ACTING CHIEF  
COMMUNITY PLANNING BRANCH

FROM: SOCRATES D. BRATAKOS, ASSISTANT CHIEF

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
PVT LAND COMPANY LIMITED INTEGRATED SOLID WASTE  
MANAGEMENT FACILITY RELOCATION  
NANAKULI, OAHU  
TAX MAP KEY: 8-7-009: 007

In response to a memorandum from Mr. Franz Kraintz dated January 23, 2019, regarding the abovementioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. 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 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

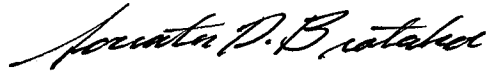
A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)

2. 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 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 [Authority Having Jurisdiction]. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)
4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at 723-7151 or [wmasuda@honolulu.gov](mailto:wmasuda@honolulu.gov).



SOCRATES D. BRATAKOS  
Assistant Chief

SDB/TC:gl

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July 9, 2019

Cynthia K.L. Rezentes, Chair  
Nanakuli-Mailii Neighborhood Board No. 36  
c/o Neighborhood Commission  
925 Dillingham Boulevard Suite 160  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Rezentes:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

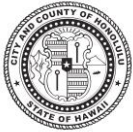


**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Cynthia K.L. Rezentes, Chair Nanakuli-Mailii Neighborhood Board No. 36
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 21, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p>The Nanakuli-Mailii Neighborhood Board No. 36 held our regularly scheduled meeting on January 15, 2019. One of the topics on our agenda was to hear about the PVT Integrated Solid Waste Management Facility Relocation.</p> <p>After a presentation by PVT Management, the board asked numerous questions including whether the RAIL project materials would be brought to the facility (Yes), asked about mitigation of speeding trucks on Lualualei Naval Road and installation of signage to remind drivers the speed limit (Mr. Joseph responded he would also requesting that speeding trucks be reported to them which elicited a request for a hotline number), about improving the condition of the roadway leading to PVT, the timeframe of the project (answered at the meeting), and whether this project would lead to more traffic (during the transition timeframe perhaps and kept to a minimum).</p> <p>The PVT Management Team was also commended on their zero tolerance towards speeding and their support to the community.</p> <p>Subsequent to the information being presented, a motion was offered: <b>Motion to support the concept to proceed with final review and approval upon the Environmental Impact Statement coming before the Board.</b> The motion passed unanimously.</p>	<p>Thank you for allowing PVT to present at the January 15, 2019 Nanakuli-Mailii Neighborhood Board No. 36 meeting.</p> <p>The draft EIS will address the discussion points and concerns expressed by the Board, including those listed in your letter.</p> <p>We appreciate the Board's support of the project concept. PVT will update the Nanakuli-Mailii Neighborhood Board on the progress of the project after the draft EIS is published. Mahalo.</p>



NANAKULI-MAILI NEIGHBORHOOD BOARD NO. 36

C/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD SUITE 160 • HONOLULU, HAWAII 96817  
TEL: (808) 768-3710 • FAX: (808) 768-3711 • INTERNET: <http://www.honolulu.gov/nco>

February 21, 2019

Franz Kraintz, AICP  
Email: [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)  
Tel: (808) 768-8046  
7 th Floor, 650 South King Street  
Honolulu, HI 96813

**Re: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation**

Dear Mr. Kraintz,

The Nanakuli-Maili Neighborhood Board No. 36 held our regularly scheduled meeting on January 15, 2019. One of the topics on our agenda was to hear about the PVT Integrated Solid Waste Management Facility Relocation.

After a presentation by PVT Management, the board asked numerous questions including whether the RAIL project materials would be brought to the facility (Yes), asked about mitigation of speeding trucks on Lualualei Naval Road and installation of signage to remind drivers the speed limit (Mr. Joseph responded he would also requesting that speeding trucks be reported to them which elicited a request for a hotline number), about improving the condition of the roadway leading to PVT, the timeframe of the project (answered at the meeting), and whether this project would lead to more traffic (during the transition timeframe perhaps and kept to a minimum.

The PVT Management Team was also commended on their zero tolerance towards speeding and their support to the community.

Subsequent to the information being presented, a motion was offered: **Motion to support the concept to proceed with final review and approval upon the Environmental Impact Statement coming before the Board.** The motion passed unanimously.

If there are any questions, pertaining to this position, please contact me at [rezentesc@aol.com](mailto:rezentesc@aol.com) or 497-1432.

Sincerely,

Cynthia K.L. Rezentes, Chair  
Nanakuli-Maili Neighborhood Board No. 36

Cc: Stephen E. Joseph  
Hart Crowser, Inc., Karl Bromwell  
Councilmember Pine

Senator Shimabukuro  
Representative Eli  
Representative Gates

## ***EISPN Comment Letters and Responses - Other Interested Parties and Community Members***

- The Environmental Justice Working Committee of the Concerned Elders of Waianae
- Hawaiian Electric Company
- KAHEA: The Hawaiian-Environmental Alliance
- Joy Inada, Community Member
- Cynthia Rezentes, Community Member
- Joseph Simpliciano, Community Member
- Jasmine Torres, Community Member

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July 9, 2019

Lucy Gay  
The Environmental Justice Working Group of the Concerned Elders of Waianae  
[maninibeach2@yahoo.com](mailto:maninibeach2@yahoo.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Gay:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Lucy Gay The Environmental Justice Working Committee of the Concerned Elders of Waianae
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 12, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
1. What is the cultural history of the project site? How is this project proposal consistent with the cultural history of this area?	The draft EIS will discuss the cultural history of the Project Site and potential impacts of the Proposed Action on cultural resources. Cultural Surveys Hawaii prepared a <i>Cultural Impact Assessment</i> for the Proposed Action, which will be included as an appendix to the draft EIS.
2. Protection of Hina's Cave and the view plane to Hina's Cave. Desecration if the toxic dust from the landfill goes into the cave and no more views of the cave from street level. In the past October 2007 Cultural Impact Assessment authored by Kēhaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai'i, they emphasized that the community was adamant that these places not be cut off from each other so that sight lines and lines of aka (energy) not be disrupted. How will Hina's Cave be protected?	<p>The draft EIS will contain a visual impact analysis and computer renderings of the Proposed Action at maximum elevation (255 feet above mean sea level). The study will assess views of Hina's Cave (located on the slope of Puu Haleakala at 600 feet above mean sea level) from street level and the view from Hina's Cave towards Maui Rock. The Proposed Action was designed to minimize visual impacts and to preserve views toward Hina's Cave from the surrounding area.</p> <p>Please see our response to comment 3, regarding nine human health risk assessment studies that have been performed over the last 15 years, showing that the PVT ISWMF does not generate toxic dust.</p>
3. Ongoing problem in that area is the fugitive poisonous dust. People in the neighboring Coral Sands community have suffered for many years since 1992 from respiratory diseases and cancers, especially asthma,	The draft EIS will include a project-specific <i>Air Quality Impact Report</i> , to evaluate potential dust emissions. This report will be included as an appendix to the draft EIS. The air quality discussion will also include a summary of nine air

<p>and Nanakuli has the highest rate of asthma on O'ahu. The area selected is known to be a wind funnel from the Heleakalā ridgeline. The wind whips through the area and the dust goes over, around and through the communities where families live. People have tried to line plastic over their windows and doors in order to keep the dust out, but the dust still invades their homes, making their lives painfully difficult. Toxicity is not just about the substance of the dust but about the ways that it affects people's health by getting into their lungs and bodies. Wai'anae has economically depressed communities, so their health is already at-risk. The increase in dust has a greater impact on their health. How will PVT address the dust problem issuing from the roadway, daily cover, etc.? What kind of dust barriers will be used to protect nearby residential, clinics, senior homes, schools, businesses, communities and pedestrian traffic, prior to construction, during operation and in perpetuity for long-term permanent protection from fugitive dust? Will the green belt barrier be installed prior to construction and operation? Is there a landscape plan that details the type of trees and shrubs that will be selected that incorporates the special interest and needs of the neighboring residences? Will there be a real-time meter to monitor wind speed, and will operations be suspended when wind speeds reach a certain level? Will there be ways of measuring the totality of dust generated from operations?</p>	<p>quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. The results of these studies demonstrate that dust generated by PVT operations does not pose a health concern. These studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area.</p> <p>The draft EIS will discuss dust mitigation measures planned for the Proposed Action. PVT would implement dust control measures to minimize the generation and dispersal of fugitive dust, including:</p> <ul style="list-style-type: none"> <li>■ pave and regularly clean permanent access and haul roads;</li> <li>■ apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;</li> <li>■ apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;</li> <li>■ landscape closed portions of the landfill area;</li> <li>■ apply soil cement to unused portions of the landfill area;</li> <li>■ maintain a 750-foot buffer zone along the southern property boundary;</li> <li>■ install a dust screen along the southern property boundary;</li> <li>■ maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific <i>Landscaping Plan</i>;</li> <li>■ install and maintain a wheel wash to clean the tires of trucks leaving the site; and</li> <li>■ periodically sweep Lualualei Naval Road between the intersection of Farrington Highway and the PVT entrance with PVT's commercial street sweeper.</li> </ul> <p>A <i>Landscaping Plan</i> is also being prepared for the Proposed Action. PVT would plant a green belt</p>
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	<p>along the western perimeter of the Project Site adjacent to Lualualei Naval Road. Landscaping will also be provided in the 750-foot buffer zone to the south. The landscaping would be installed during construction and before operations commence. The landscaping would help reduce dust generation.</p> <p>PVT maintains a weather monitor on the existing administrative building. PVT closes the facility and ceases operations when wind speeds exceed 40 miles per hour.</p>
<p>4. Has PVT considered a green belt buffer to isolate an activity that is incompatible with residential communities? A thousand foot green buffer belt, for example?</p>	<p>PVT would maintain 750-foot buffer zone with landscaping along the southern property boundary.</p>
<p>5. PVT must prove that the project site is outside of the Underground Injection Control Line (UIC Line)? We would like to see specific maps that show us where the UIC Line is. We want evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Will sea level rise affect the UIC Line and thus the project?</p>	<p>The draft EIS will discuss potential impacts to groundwater and will include a map of the UIC Line. The UIC line is determined by the State of Hawaii.</p> <p>The Proposed Action is located over three aquifers, which are classified as not suitable for drinking water and not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990). The Project Site is located about three (3) miles away and down gradient from the nearest drinking water source. The landfill area will be lined and monitored to protect the underlying groundwater. Therefore, the Proposed Action does not pose a threat to current drinking water sources.</p> <p>The draft EIS will discuss potential impacts of sea level rise on the Proposed Action. The Hawaii Sea Level Rise Viewer (<a href="http://www.pacioos.hawaii.edu/shoreline/slr-hawaii">http://www.pacioos.hawaii.edu/shoreline/slr-hawaii</a>) indicates that the Proposed Action is outside the sea level rise exposure area and is not at risk of passive or high wave flooding with 3.2 feet of sea level rise (SLR-XA). It is not expected that the UIC line or the Proposed Action would be impacted by sea level rise associated with climate</p>

	change.
<p>6. PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail. What will happen to the lining after 25 or 30 years? How does the liner “exceed the requirements of State C&amp;D regulations” (2-5).</p>	<p>The draft EIS will discuss the landfill liner and leachate collection system. The landfill liner installation is certified by a professional engineer and meets rigorous quality assurance standards. PVT would regularly monitor groundwater to verify the integrity of the liner. The life expectancy of a high-density polyethylene liner in buried applications, such as solid waste landfills, is up to 300 years. The liner exceeds the requirements of State C&amp;D regulations because C&amp;D landfills are only required to install a clay barrier; the proposed liner meets state requirements for municipal solid waste landfills.</p>
<p>7. How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? Is there an established schedule for monitoring, inspecting and reporting results to the community? How will the community access these inspection reports? Will these inspection reports be available online?</p>	<p>The draft EIS will include a project-specific <i>Geology, Hydrogeology, and Water Quality Report</i> that addresses hydrogeology, stormwater, and water quality assessments. This report will be included as an appendix to the draft EIS.</p> <p>Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF’s <i>Groundwater and Leachate Monitoring Plan</i>, which is a requirement of the facility’s Solid Waste Management Permit. The <i>Groundwater and Leachate Monitoring Plan</i> specifies the number of groundwater monitoring wells, the constituents analyzed for, the data evaluation methods, and the frequency of sampling and reporting. The existing <i>Groundwater and Leachate Monitoring Plan</i> for the PVT ISWMF would be updated to incorporate additional monitoring wells and leachate sumps that are planned as part of the Proposed Action. PVT has been sampling the groundwater monitoring wells, which surround the existing PVT ISWMF since 1992. The monitoring data indicates that leachate from the existing PVT ISWMF landfill does not impact groundwater. Currently, groundwater monitoring wells are sampled semiannually, and the leachate sump is sampled annually. Reports are submitted to the HDOH semiannually. The reports are available at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. The location and contact information for the HDOH, Solid and</p>

	<p>Hazardous Waste Branch can be found at <a href="http://health.hawaii.gov/shwb/">http://health.hawaii.gov/shwb/</a>. The reports are not currently available online.</p>
<p>8. PVT needs to provide a thorough analysis of other possible sites for a C&amp;D landfill. Nānākuli B is not the only site for such a landfill.</p>	<p>The draft EIS will include an alternatives analysis, including alternative landfill locations identified by the City and County of Honolulu. The PVT ISWMF is privately owned and operated. The Project Site is the only location owned by a PVT affiliate and immediately available to PVT for use for the Proposed Action.</p>
<p>9. PVT needs to do an updated traffic study to prove that there will be 300 trucks and whether the number will increase due to the infill developments in urban Honolulu. We want monitoring of older truck models and sizes of truck to monitor particulate emissions. We want a 2.5 pm and 10pm particulate study conducted.</p>	<p>The draft EIS will discuss potential impacts to traffic. The Traffic Management Consultant prepared a <i>Traffic Impact Assessment Report</i> for the Proposed Action, which will be included as an appendix to the draft EIS.</p> <p>PVT is permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day and up to 3,000 tons of C&amp;D debris per day. PVT does not propose to increase these limits.</p> <p>The draft EIS will discuss potential impacts to Air Quality, including emission rates for particulate matter with effective aerodynamic diameters of 10 microns (PM10) and 2.5 microns (PM2.5).</p>
<p>10. We are concerned about the dust that is kicked into the air by the truck tires. If PVT will continue to accept asbestos at the old PVT sites? Will this increase the number of trucks travelling on Lualualei Naval Access Road?</p>	<p>PVT continues to work with the Navy to address dust generated by truck traffic on Lualualei Naval Road.</p> <p>PVT would continue to accept double-bagged Asbestos Containing Material (ACM) at the existing PVT ISWMF until final grades within this area are achieved, at which time PVT will no longer accept ACM. No ACM area is proposed for the Project Site. This is not anticipated to increase truck traffic.</p>
<p>11. Does PVT need a new long-term lease for access to the road from the Navy? Does PVT have proof of a fifty-year long-term easement from the Navy for the use of the Lualualei Naval Access Road?</p>	<p>The PVT ISWMF site and the Project Site were originally one parcel, but the Navy, with the permission of the landowner, bisected the property into two parcels in 1931. As part of this division, the two parcels retained access rights via the Lualualei Naval Road. This access right does not have an expiration date.</p>



<p>12. As a community, we propose a different solution. We want to keep that land in agriculture and we would like to see that land be used as agricultural incubator to expand food cultivation in the Agricultural District of Lualualei. Such an agricultural buffer zone would protect Hina's Cave and other cultural sites.</p>	<p>The draft EIS will include a description of the history of the Project Site and its uses. The Project Site is not currently used for agriculture, nor has it been used for agriculture in the past. The draft EIS will also include a description of the geology at the Project Site. The site does not have soil qualities or growing conditions that support agricultural production of food, fiber, or fuel- and energy-producing crops. The Proposed Action will be designed to avoid adverse impacts to Hina's Cave and other cultural sites.</p>
<p>13. We are also concerned about the catchment basin. The EISPN refers to the conditions of a 25-year rainstorm. In light of current conditions of climate change, and the overflow at Waimanalo Sanitary Landfill a few years ago, we have to be anticipating an increase in frequency of these powerful storms. Has this project has been analyzed to be safe under conditions of sea level rise?</p>	<p>The draft EIS will discuss the stormwater management system and stormwater basin design. The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).</p> <p>In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that storm events and the sea level rise associated with climate change will be properly managed with no impact to the Proposed Action.</p> <p>The existing PVT ISWMF stormwater management system was designed and constructed in accordance with the above referenced solid waste regulations. This system has performed well during storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.</p>
<p>14. PVT must provide a market study. What is the demand for expansion beyond Kaka'ako?</p>	<p>PVT relies on the City and County of Honolulu to forecast the demand for C&amp;D solid waste management over the 25-year planning horizon (CCH 2017, CCH 2008). In addition to Kakaako, PVT is aware of construction projects associated with military housing, the Honolulu rail project and other developments.</p> <p>PVT currently recycles or reuses 80% of the C&amp;D</p>

	<p>debris received and continues to seek technologies that divert materials from the landfill.</p> <p>PVT has exhausted all site planning and permitting opportunities (i.e., expanded recycling efforts, vertical expansion, horizontal expansion) to increase capacity at the existing PVT ISWMF. PVT is initiating closure activities at the PVT ISWMF, in accordance with their Solid Waste Management Permit.</p> <p>The closure of the PVT ISWMF would leave Oahu without a C&amp;D landfill. The CCH would need to modify their integrated solid waste management plans and identify an alternative C&amp;D disposal site.</p>
<p>15. What are the producers of waste and the construction industry doing to reduce their waste stream of materials that are ending up in Lualualei? We want to extend the life of the current C&amp;D landfill.</p>	<p>Project designers and engineers are motivated to divert C&amp;D debris from landfills in order to qualify for Leadership in Energy and Environmental Design credit. PVT provides documentation of the diverted materials. Contractors are encouraged to segregate and sort materials at the job site to the extent practical. However, it is challenging to recycle at individual construction sites due to lack of space and equipment for sorting and processing.</p> <p>Both segregated and mixed C&amp;D debris are accepted by PVT and recycled/reused to the extent practical. It is often more efficient to use PVT's sorting and processing equipment to separate loads into recyclable materials. PVT has the space and has invested in this technology. For this reason, PVT is the largest recycler on Oahu.</p>

**To: Karl Bromwell**  
**Email: [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)**

**From: The Environmental Justice Working Committee of the Concerned Elders of Waianae**

**Date: February 12, 2019**

**RE: Comments on the PVT Environmental Impact Statement Preparation Notion (EISPN)**

Announcement: Open house: February 23, 2019, 10-2 at PVT Landfill

Issue: Future closure of PVT Landfill and relocation to Nānākuli B  
-current site can go up to 250 ft height variance

Entitlement Review Process to Note:

Landfills take 4-7 years to get all approvals

PVTLand needs to go to the Land Use Commission for a Special Use Permit and the City Council for approval for building a solid waste landfill (is it conditional? Check Land Use Ordinance).

"The landfill height would be limited to 255 ft. amsl at the landfill's closure to preserve mountain and ocean views of Hina's cave (located at about 600 ft. amsl) and Maui Rock" (5-4)

We recognize the importance of establishing a new construction and demolition landfill that recycles construction and demolition waste, but siting the project at Nānākuli B is an issue of great concern to the communities who live there.

In her audit of the Department of Health's administration of the Solid Waste Program and Assessment of Solid Waste Policies, Marion Higa states,  
Concerns:

1. What is the cultural history of the project site? How is this project proposal consistent with the cultural history of this area?
  1. Protection of Hina's Cave and the view plane to Hina's Cave. Desecration if the toxic dust from the landfill goes into the cave and no more views of the cave from street level. In the past October 2007 Cultural Impact Assessment authored by Kēhaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai'i, they emphasized that the community was adamant that these places not be cut off from each other so that sight lines and lines of aka (energy) not be disrupted. How will Hina's Cave be protected?

3. Ongoing problem in that area is the fugitive poisonous dust. People in the neighboring Coral Sands community have suffered for many years since 1992 from respiratory diseases and cancers, especially asthma, and Nanakuli has the highest rate of asthma on O'ahu. The area selected is known to be a wind funnel from the Heleakalā ridgeline. The wind whips through the area and the dust goes **over, around and through** the communities where families live. People have tried to line plastic over their windows and doors in order to keep the dust out, but the dust still invades their homes, making their lives painfully difficult. Toxicity is not just about the substance of the dust but about the ways that it affects people's health by getting into their lungs and bodies. Wai'anae has economically depressed communities, so their health is already at-risk. The increase in dust has a

greater impact on their health. How will PVT address the dust problem issuing from the roadway, daily cover, etc.? What kind of dust barriers will be used to protect nearby residential, clinics, senior homes, schools, businesses, communities and pedestrian traffic, prior to construction, during operation and in perpetuity for long-term permanent protection from fugitive dust? Will the green belt barrier be installed prior to construction and operation? Is there a landscape plan that details the type of trees and shrubs that will be selected that incorporates the special interest and needs of the neighboring residences? Will there be a real-time meter to monitor wind speed, and will operations be suspended when wind speeds reach a certain level? Will there be ways of measuring the totality of dust generated from operations?

4. Has PVT considered a green belt buffer to isolate an activity that is incompatible with residential communities? A thousand foot green buffer belt, for example?

5. **PVT must prove that the project site is outside of the Underground Injection Control Line (UIC Line)? We would like to see specific maps that show us where the UIC Line is.** We want evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Will sea level rise affect the UIC Line and thus the project?

6. PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail. What will happen to the lining after 25 or 30 years? How does the liner “exceed the requirements of State C&D regulations” (2-5).

7. How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? Is there an established schedule for monitoring, inspecting and reporting results to the community? How will the community access these inspection reports? Will these inspection reports be available online?

8. PVT needs to provide a thorough analysis of other possible sites for a C&D landfill. Nānākuli B is not the only site for such a landfill.

9. PVT needs to do an updated traffic study to prove that there will be 300 trucks and whether the number will increase due to the infill developments in urban Honolulu. We want monitoring of older truck models and sizes of truck to monitor particulate emissions. We want a 2.5 pm and 10pm particulate study conducted.

10. We’re concerned about the dust that is kicked into the air by the truck tires. If PVT will continue to accept asbestos at the old PVT sites? Will this increase the number of trucks travelling on Lualualei Naval Access Road?

11. Does PVT need a new long-term lease for access to the road from the Navy? Does PVT have proof of a fifty-year long-term easement from the Navy for the use of the Lualualei Naval Access Road?

12. As a community, we propose a different solution. We want to keep that land in agriculture and we would like to see that land be used as agricultural incubator to expand food cultivation in the Agricultural District of Lualualei. Such an agricultural buffer zone would protect Hina’s Cave and other cultural sites.

13. We are also concerned about the catchment basin. The EISPN refers to the conditions of a 25-year rainstorm. In light of current conditions of climate change, and the overflow at Waimanalo Sanitary Landfill a few years ago, we have to be anticipating an increase in frequency of these powerful storms. Has this project has been analyzed to be safe under conditions of sea level rise?

14. PVT must provide a market study. What is the demand for expansion beyond Kaka’ako?

15. What are the producers of waste and the construction industry doing to reduce their wastestream of materials that are ending up in Lualualei? We want to extend the life of the current C&D landfill.

July 9, 2019

Rouen Liu  
Permit Engineer  
Hawaiian Electric Company  
[rouen.liu@hawaiianelectric.com](mailto:rouen.liu@hawaiianelectric.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Liu:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Mr. Rouen Liu, Permit Engineer Hawaiian Electric Company
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 6, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project relocation. Should Hawaiian Electric have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities. We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed Solid Waste Management Facility Relocation project comes to fruition, please continue to keep us informed.	<p>We have noted that Hawaiian Electric Company (HECO) has no objection to the Proposed Action.</p> <p>A 44-kilovolt power line, reported to be currently unused, crosses the southern portion of the Project Site. PVT will coordinate with HECO to relocate this line to the southeast boundary of the Project Site.</p> <p>Should HECO have other existing easements and facilities on the subject property, PVT will be able to arrange for access for maintenance.</p> <p>Thank you for your continued interest. We will keep you informed of the project's progress, including publication of the draft EIS.</p>



**Kraintz, Franz**

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**From:** Liu, Rouen <rouen.liu@hawaiianelectric.com>  
**Sent:** Wednesday, February 06, 2019 9:29 AM  
**To:** EIS@Pvtland.com; Kraintz, Franz  
**Cc:** Kuwaye, Kristen  
**Subject:** PVT Integrated Solid Waste Management Facility Relocation EISPN - Hawaiian Electric  
Request for review and comment

Dear Mr. Bromwell and Mr. Kraintz,

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project relocation. Should Hawaiian Electric have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities. We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed Solid Waste Management Facility Relocation project comes to fruition, please continue to keep us informed.

Should there be any questions, please contact me at 543-7245.

Thank you,

Rouen Liu  
Permit Engineer  
Hawaiian Electric Company

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July 9, 2019

Candace Fujikane  
Board Member  
KAHEA: The Hawaiian-Environmental Alliance  
P.O. Box 37368  
Honolulu, Hawaii 96837

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Fujikane:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Candace Fujikane, Board Member KAHEA: The Hawaiian-Environmental Alliance
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 22, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
1. The proposed project site is located on the 'ili of Kaolae which stretches along the base of Pu'u Heleakala from the Naval Magazine down to the sea where the promontory of Pu 'u Heleakala touches the beach. The 'ili of Kaolae is proven in Land Commission Award documents to be the birthplace of the ho'okala kupua (supernatural being) Maui. How will the proposed project address its location on this highly sensitive area?	The draft EIS will discuss the cultural history of the Project Site and potential impacts of the Proposed Action on cultural resources. Cultural Surveys Hawaii prepared a <i>Cultural Impact Assessment</i> for the Proposed Action, which will be included as an appendix to the draft EIS.
2. Protection of Hina's Cave and the view plane to Hina's Cave is a concern. In the past October 2007 Cultural Impact Assessment authored by Kehaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai'i, they emphasized that the community was adamant that Hina's Cave be protected. How will the proposed project not obstruct view places to Hina's Cave from the street level?	The draft EIS will contain a visual impact analysis and computer renderings of the Proposed Action at maximum elevation (255 feet above mean sea level). The study will assess views of Hina's Cave (located on the slope of Puu Haleakala at 600 feet above mean sea level) from street level and the view from Hina's Cave towards Maui Rock. The Proposed Action was designed to minimize visual impacts and to preserve views toward Hina's Cave from the surrounding area.
3. Residents of the neighboring Coral Sands community have suffered since 1992 from respiratory diseases and cancers, especially asthma, and Wai'anae has the highest rate of asthma on O' ahu. How will nearby residences, schools, farms, and businesses be protected? How will the project	The draft EIS will include a project-specific <i>Air Quality Impact Report</i> , to evaluate potential dust emissions. This report will be included as an appendix to the draft EIS. The air quality discussion will also include a summary of nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the

<p>measure the totality of dust generated from operations?</p>	<p>last 15 years. The results of these studies demonstrate that dust generated by PVT operations does not pose a health concern. These studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area.</p> <p>The draft EIS will discuss dust mitigation measures planned for the Proposed Action. PVT would implement dust control measures to minimize the generation and dispersal of fugitive dust, including:</p> <ul style="list-style-type: none"> <li>■ pave and regularly clean permanent access and haul roads;</li> <li>■ apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;</li> <li>■ apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;</li> <li>■ landscape closed portions of the landfill area;</li> <li>■ apply soil cement to unused portions of the landfill area;</li> <li>■ maintain a 750-foot buffer zone along the southern property boundary;</li> <li>■ install a dust screen along the southern property boundary;</li> <li>■ maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific <i>Landscaping Plan</i>;</li> <li>■ install and maintain a wheel wash to clean the tires of trucks leaving the site; and</li> <li>■ periodically sweep Lualualei Naval Road between the intersection of Farrington Highway and the PVT entrance with PVT's commercial street sweeper.</li> </ul> <p>A <i>Landscaping Plan</i> is also being prepared for the Proposed Action. PVT would plant a green belt along the western perimeter of the Project Site adjacent to Lualualei Naval Road. Landscaping</p>
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	<p>will also be provided in the 750-foot buffer zone to the south. The landscaping would be installed during construction and before operations commence. The landscaping would help reduce dust generation.</p> <p>PVT continues to work with the Navy to address dust generated by truck traffic on Lualualei Naval Road.</p>
<p>4. PVT must prove that the project site is outside of the Underground Injection Control Line (UIC). We would like to see specific maps that show us where the UIC Line is. We want evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Will sea level rise affect the UIC Line and thus the project?</p>	<p>The draft EIS will discuss potential impacts to groundwater and will include a map of the UIC Line. The UIC line is determined by the State of Hawaii.</p> <p>The Proposed Action is located over three aquifers, which are classified as not suitable for drinking water and not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990). The Project Site is located about three (3) miles away and down gradient from the nearest drinking water source. The landfill area will be lined and monitored to protect the underlying groundwater. Therefore, the Proposed Action does not pose a threat to current drinking water sources.</p> <p>The draft EIS will discuss potential impacts of sea level rise on the Proposed Action. The Hawaii Sea Level Rise Viewer (<a href="http://www.pacioos.hawaii.edu/shoreline/slr-hawaii">http://www.pacioos.hawaii.edu/shoreline/slr-hawaii</a>) indicates that the Proposed Action is outside the sea level rise exposure area and is not at risk of passive or high wave flooding with 3.2 feet of sea level rise (SLR-XA). It is not expected that the UIC line or the Proposed Action would be impacted by sea level rise associated with climate change.</p>
<p>5. PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail? What will happen to the lining after 25 or 30 years? How does the liner "exceed the requirements of State C&amp;D regulations" (2-</p>	<p>The draft EIS will discuss the landfill liner and leachate collection system. The landfill liner installation is certified by a professional engineer and meets rigorous quality assurance standards. PVT would regularly monitor groundwater to verify the integrity of the liner. The life expectancy of a high-density polyethylene liner in</p>



5).	buried applications, such as solid waste landfills, is up to 300 years. The liner exceeds the requirements of State C&D regulations because C&D landfills are only required to install a clay barrier; the proposed liner meets state requirements for municipal solid waste landfills.
<p>6. How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? How will the community access these inspection reports? Will these inspection reports be available online?</p>	<p>The draft EIS will include a project-specific <i>Geology, Hydrogeology, and Water Quality Report</i> that addresses hydrogeology, stormwater, and water quality assessments. This report will be included as an appendix to the draft EIS.</p> <p>Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's <i>Groundwater and Leachate Monitoring Plan</i>, which is a requirement of the facility's Solid Waste Management Permit. The <i>Groundwater and Leachate Monitoring Plan</i> specifies the number of groundwater monitoring wells, the constituents analyzed for, the data evaluation methods, and the frequency of sampling and reporting. The existing <i>Groundwater and Leachate Monitoring Plan</i> for the PVT ISWMF would be updated to incorporate additional monitoring wells and leachate sumps that are planned as part of the Proposed Action. PVT has been sampling the groundwater monitoring wells, which surround the existing PVT ISWMF since 1992. The monitoring data indicates that leachate from the existing PVT ISWMF landfill does not impact groundwater. Currently, groundwater monitoring wells are sampled semiannually, and the leachate sump is sampled annually. Reports are submitted to the HDOH semiannually. The reports are available at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. The location and contact information for the HDOH, Solid and Hazardous Waste Branch can be found at <a href="http://health.hawaii.gov/shwb/">http://health.hawaii.gov/shwb/</a>. The reports are not currently available online.</p>
<p>7. PVT needs to provide a thorough analysis of other possible sites for a C&amp;D landfill. Nanakuli B is not the only site for such a</p>	<p>The draft EIS will include an alternatives analysis, including alternative landfill locations identified by the City and County of Honolulu. The PVT ISWMF is privately owned and operated. The</p>

landfill.	Project Site is the only location owned by a PVT affiliate and immediately available to PVT for use for the Proposed Action.
8. PVT needs to do an updated traffic study to prove that there will be 300 trucks and whether the number will be increasing.	<p>The draft EIS will discuss potential impacts to traffic. The Traffic Management Consultant prepared a <i>Traffic Impact Assessment Report</i> for the Proposed Action, which will be included as an appendix to the draft EIS.</p> <p>PVT is permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day and up to 3,000 tons of C&amp;D debris per day. PVT does not propose to increase these limits.</p>
9. Will PVT continue to accept asbestos at the old PVT site?	PVT would continue to accept double-bagged Asbestos Containing Material (ACM) at the existing PVT ISWMF until final grades within this area are achieved, at which time PVT will no longer accept ACM. No ACM disposal area is proposed for the Proposed Action.
10. Does PVT need a new long-term lease for access to the road from the Navy? Does PVT have proof of a fifty-year long-term easement from the Navy for the use of the Lualualei Naval Access Road?	The PVT ISWMF site and the Project Site were originally one parcel, but the Navy, with the permission of the landowner, bisected the property into two parcels in 1931. As part of this division, the two parcels retained access rights via the Lualualei Naval Road. This access right does not have an expiration date.
11. We are also concerned about the catchment basin. The EISPN refers to the conditions of a 25-year rainstorm. How will the proposed project address current conditions of climate change and the increasing frequency of powerful storms that used to be anomalous?	<p>The draft EIS will discuss the stormwater management system and stormwater basin design. The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).</p> <p>In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that storm events and the sea level rise associated with climate change will be properly managed with no impact to the Proposed Action.</p>

	<p>The existing PVT ISWMF stormwater management system was designed and constructed in accordance with the above referenced solid waste regulations. This system has performed well during storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.</p>
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PROTECTING

NATIVE HAWAIIAN

CUSTOMARY & TRADITIONAL

RIGHTS AND OUR FRAGILE

ENVIRONMENT

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Mailing Address  
P.O. Box 37368  
Honolulu, HI 96837

toll-free phone/fax  
877.585.2432

www.KAHEA.org  
kahea-alliance@hawaii.rr.com

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*KAHEA: the Hawaiian-Environmental Alliance is a non-profit 501(c)3 working to protect the unique natural and cultural resources of the Hawaiian islands. KAHEA translates to English as "the call."*

Franz Krintz, AICP, (808) 768-8046, fkrantz@honolulu.gov  
Department of Planning and Permitting, City and County of Honolulu 650  
S. King St., 7th Floor, Honolulu, HI 96813

February 22, 2019

Re: PVT Environmental Impact Statement Preparation Notion (EISPN)

Aloha pumehana Mr. Krintz,

Mahalo for accepting our comments on the PVT EISPN on the closure of PVT Landfill and the relocation of its C&D debris receiving, recycling, and disposal operation to a parcel, owned by a PVT-affiliate, on the opposite side of Lualualei Naval Road from its current location.

KAHEA is a community-based network of nearly 10,000 kupuna, cultural practitioners, resource users, educators, and concerned residents working to protect the unique natural and cultural resources of Hawai'i nei.

We recognize the importance of establishing a new construction and demolition landfill that recycles construction and demolition waste, but siting the project at Nānākuli B is an issue of great concern to the communities who live in the area.

Concerns:

1. The proposed project site is located on the 'ili of Kaolae which stretches along the base of Pu'u Heleakalā from the Naval Magazine down to the sea where the promontory of Pu'u Heleakalā touches the beach. The 'ili of Kaolae is proven in Land Commission Award documents to be the birthplace of the ho'okala kupua (supernatural being) Māui. How will the proposed project address its location on this highly sensitive area?

2. Protection of Hina's Cave and the view plane to Hina's Cave is a concern. In the past October 2007 Cultural Impact Assessment authored by Kēhaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai'i, they emphasized that the community was adamant that Hina's Cave be protected. How will the proposed project not obstruct view places to Hina's Cave from the street level?

3. Residents of the neighboring Coral Sands community have suffered since 1992 from respiratory diseases and cancers, especially asthma, and Wai'anae has the highest rate of asthma on O'ahu. How will nearby residences, schools, farms, and businesses be protected? How will the project measure the totality of dust generated from operations?

4. **PVT must prove that the project site is outside of the Underground Injection Control Line (UIC). We would like to see specific maps that show us where the UIC Line is.** We want evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Will sea level rise affect the UIC Line and thus the project?
5. PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail? What will happen to the lining after 25 or 30 years? How does the liner "exceed the requirements of State C&D regulations" (2-5).
6. How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? How will the community access these inspection reports? Will these inspection reports be available online?
7. PVT needs to provide a thorough analysis of other possible sites for a C&D landfill. Nānākuli B is not the only site for such a landfill.
8. PVT needs to do an updated traffic study to prove that there will be 300 trucks and whether the number will be increasing.
9. Will PVT continue to accept asbestos at the old PVT site?
10. Does PVT need a new long-term lease for access to the road from the Navy? Does PVT have proof of a fifty-year long-term easement from the Navy for the use of the Lualualei Naval Access Road?
11. We are also concerned about the catchment basin. The EISPN refers to the conditions of a 25-year rainstorm. How will the proposed project address current conditions of climate change and the increasing frequency of powerful storms that used to be anomalous?

Mahalo,



Candace Fujikane

Board Member

**Kraintz, Franz**

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**From:** Candace Fujikane <fujikane@hawaii.edu>  
**Sent:** Saturday, February 23, 2019 12:00 AM  
**To:** Kraintz, Franz  
**Subject:** KAHEA Comments on PVT EISPN  
**Attachments:** KAHEA letterhead blank.docx

Dear Mr. Kraintz,  
Please accept our comments on the PVT EISPN in the attached document.  
Mahalo,  
Candace Fujikane  
Board Member, KAHEA: The Hawaiian-Environmental Alliance



July 9, 2019

Joy Inada  
[Joyst1babe@msn.com](mailto:Joyst1babe@msn.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Inada:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Joy Inada Community Member
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 7, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p>Hi, getting straight to the subject of the landfill that I currently live right below of. Whatever happened to the community park we were promised to have? I get that this landfill will probably happen despite any complaints against it because no government individual nor representative of the landfill has the gumption to stand against these plans to create another section for PVT. There is no other place to create such a hidden eyesore that creates so much red dust it's no wonder there are so many with illnesses living in the area. Also the intake process PVT has for toxic waste is nothing but a means of greed. Take a look at the KMCAS dumping of so called cleaned toxic waste that was dumped into PVT before the public even knew it was already disposed there. I've seen the documents concerning this disposal. If you have any concerns or conscious regarding how others are living under these conditions hazardous to ones health, I ask you, would you have your own family live across the PVT knowing the possibility their health is at risk, I hardly believe you would. I'm against it being extended here please build this further in the valley away from residences, they owe us at least that!</p>	<p>Mahalo for your comments and concerns on the proposed relocation of the PVT ISWMF.</p> <p>The Waianae Sustainable Community Plan as approved by the City Council does not designate the Project Site as a community park.</p> <p>The draft EIS will describe the debris acceptance procedures at PVT ISWMF, which would be similar for the Proposed Action. PVT only accepts construction and demolition debris. PVT does not accept household waste, industrial waste, hazardous waste, radioactive waste, or infectious waste as defined by State regulations. Special accounts, testing, and review procedures are required for customers proposing to dispose of contaminated soils or liquid wastes for solidification.</p> <p>The draft EIS will also discuss air quality and potential impacts of the Proposed Action on human health. A project-specific <i>Air Quality Impact Report</i> was prepared for the Proposed Action and will be included as an appendix to the draft EIS. The air quality discussion will also include a summary of nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. The results of these studies demonstrate that dust generated by PVT operations does not pose a health concern. These studies were submitted to</p>

	<p>Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The draft EIS will outline dust control measures to minimize the generation and dispersal of fugitive dust.</p> <p>The draft EIS will include an alternatives analysis, including alternative landfill locations identified by the City and County of Honolulu. The PVT ISWMF is privately owned and operated. The Project Site is the only location owned by a PVT affiliate and available immediately to PVT for use for the Proposed Action.</p> <p>We will keep you informed of the project's progress, including publication of the draft EIS.</p>
--	---

## Kraintz, Franz

---

**From:** joy inada <joyst1babe@msn.com>  
**Sent:** Thursday, February 07, 2019 1:39 PM  
**To:** Kraintz, Franz  
**Subject:** Fwd: PVT Landfill in Nanakuli

[Get Outlook for Android](#)

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**From:** joy inada <joyst1babe@msn.com>  
**Sent:** Thursday, February 7, 2019 1:34:48 PM  
**To:** fkraintz@honolulugov.com  
**Subject:** PVT Landfill in Nanakuli

Hi, getting straight to the subject of the landfill that I currently live right below of. Whatever happened to the community park we were promised to have? I get that this landfill will probably happen despite any complaints against it because no government individual nor representative of the landfill has the gumption to stand against these plans to create another section for PVT. There is no other place to create such a hidden eyesore that creates so much red dust it's no wonder there are so many with illnesses living in the area. Also the intake process PVT has for toxic waste is nothing but a means of greed. Take a look at the KMCAS dumping of so called cleaned toxic waste that was dumped into PVT before the public even knew it was already disposed there. I've seen the documents concerning this disposal. If you have any concerns or concerns regarding how others are living under these conditions hazardous to one's health, I ask you, would you have your own family live across the PVT knowing the possibility their health is at risk, I hardly believe you would. I'm against it being extended here please build this further in the valley away from residences, they owe us at least that!

Sent from my T-Mobile 4G LTE Device

July 9, 2019

Cynthia K.L. Rezentes  
[rezentesc@aol.com](mailto:rezentesc@aol.com)  
(808) 497-1432

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Rezentes:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Cynthia K.L. Rezentes
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 22, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
<p>As a resident of the Wai`anae Coast for many years and being involved in community issues, I would like to request that the following items be addressed in the EIS that will be developed to promote the relocation of the PVT ISWMF to the Honolulu side of the Lualualei Naval Road:</p> <ol style="list-style-type: none"> <li>1. Dust Studies/Mitigation – the current location of the landfill has caused many residents on the “downwind” side of the landfill to complain about fugitive dust invading their homes, causing additional or more respiratory problems, etc. In the past, it was determined that some of those dust issues were from the traffic of the trucks on Lualualei Naval Road. This EIS needs to address this issue as it might occur with moving to the Honolulu side of the Lualualei Naval Road and upwind of the Pacific Mall with a grocery store and multiple eating establishments, and a clinic.</li> </ol>	<p>Thank you for your comments on the PVT ISWMF Relocation EIS Preparation Notice.</p> <p>The draft EIS will include a project-<i>specific Air Quality Impact Report</i> that evaluates potential dust emissions from the Proposed Action. The draft EIS will also summarize nine air quality and human health risk assessment studies conducted for the existing PVT ISWMF operations over the last 15 years. The avoidance and minimization measures that would be implemented to reduce dust from the Proposed Action will also be described.</p>
<ol style="list-style-type: none"> <li>2. Soils – in the past a proposed project of utilizing the property for housing by the State was voided due to the types of soil on the property. Apparently, the property contained soils that would swell and then dry and crack and therefore was not considered a good choice for foundations that might be affected by weather conditions. This project should also consider whether the soils are appropriate for this project.</li> </ol>	<p>The draft EIS will discuss the geology and soils at the Project Site. The draft EIS also will address the suitability of the soils for the Proposed Action and engineering solutions to soil issues, if required.</p>



<p>3. Traffic – Please refer to the 1<sup>st</sup> issue regarding dust. Traffic generated on the road may be a factor in dust impacts. It may also be a factor in the amount of traffic generated at the Lualualei Naval Road and Farrington Highway intersection. A new Traffic study should be done to determine if the new impacts, whether temporary or long term, would cause additional burdens to the Pacific Mall entry/exit on Lualualei Naval Road or impacts to AM/PM traffic in the area.</p>	<p>The draft EIS will include a project-specific <i>Traffic Impact Assessment Report</i>, to evaluate potential impacts on traffic. This report will be included as an appendix to the draft EIS. The draft EIS will also address dust issues as noted above.</p>
<p>I would assume that the regular considerations will be done for this EIS, e.g. Archaeological Inventory Survey, Cultural Impact Survey, cumulative impacts on the surrounding area, etc.</p>	<p>The following project-specific technical studies are being conducted for inclusion in the draft EIS:</p> <ul style="list-style-type: none"> <li>• Air Quality Impact Report</li> <li>• Archaeological Literature Review and Field Inspection</li> <li>• Biological Surveys</li> <li>• Cultural Impact Assessment</li> <li>• Environmental Noise Assessment Report</li> <li>• Geology, Hydrology, and Water Quality Report</li> <li>• Traffic Impact Analysis Report</li> <li>• Visual Renderings</li> </ul>

*Cynthia K.L. Rezentes*

(808) 497-1432

Email: rezentesc@aol.com

February 22, 2019

Franz Kraintz, AICP  
Email: [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)  
Tel: (808) 768-8046  
7 th Floor, 650 South King Street  
Honolulu, HI 96813

**Re: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation**

Dear Mr. Kraintz,

Thank you for the opportunity to respond to the above project and share my concerns of what should be included in the EISPN.

As a resident of the Wai`anae Coast for many years and being involved in community issues, I would like to request that the following items be addressed in the EIS that will be developed to promote the relocation of the PVT ISWMF to the Honolulu side of the Lualualei Naval Road:

1. Dust Studies/Mitigation – the current location of the landfill has caused many residents on the “downwind” side of the landfill to complain about fugitive dust invading their homes, causing additional or more respiratory problems, etc. In the past, it was determined that some of those dust issues were from the traffic of the trucks on Lualualei Naval Road. This EIS needs to address this issue as it might occur with moving to the Honolulu side of the Lualualei Naval Road and upwind of the Pacific Mall with a grocery store and multiple eating establishments, and a clinic.
2. Soils – in the past a proposed project of utilizing the property for housing by the State was voided due to the types of soil on the property. Apparently, the property contained soils that would swell and then dry and crack and therefore was not considered a good choice for foundations that might be affected by weather conditions. This project should also consider whether the soils are appropriate for this project.
3. Traffic – Please refer to the 1<sup>st</sup> issue regarding dust. Traffic generated on the road may be a factor in dust impacts. It may also be a factor in the amount of traffic generated at the Lualualei Naval Road and Farrington Highway intersection. A new Traffic study should be done to determine if the new impacts, whether temporary or long term, would cause additional burdens to the Pacific Mall entry/exit on Lualualei Naval Road or impacts to AM/PM traffic in the area.

I would assume that the regular considerations will be done for this EIS, e.g. Archaeological Inventory Survey, Cultural Impact Survey, cumulative impacts on the surrounding area, etc.

Mahalo for letting me present my concerns and I look forward to the EIS considering all of these and other concerns that may be submitted by community members.

Sincerely,



Cynthia K.L. Rezentes

July 9, 2019

Joseph Simpliciano  
Jks75@icloud.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Mr. Simpliciano:

Thank you for your comments on the PVT ISWMF Relocation EISPN. We've considered your comments and provided responses in the enclosed document.

We appreciate your participation in this review process. We will keep you informed of the project's progress, including publication of the draft EIS. Your letter and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## RESPONSE TO COMMENTS

<b>Document (s):</b>	PVT Integrated Solid Waste Management Facility (ISWMF) Relocation Environmental Impact Statement (EIS) Preparation Notice
<b>Commenter (s):</b>	Joseph Simpliciano Community Member
<b>Responder (s):</b>	Karl Bromwell, Hart Crowser, Inc
<b>Date of Comments:</b>	February 4, 2019
<b>Date of Response:</b>	July 9, 2019

Comment	Response
Is there anyway to move this out of the westside? This landfill does nothing to help our infrastructure. It creates traffic by non stop semi trucks that speed through nanakuli and also have hit city buses. The roads in nanakuli takes a beating each and everyday. Couldn't they move the landfill to makakilo or closer to honokai Hale? There has to be a better option then putting another landfill on the westside.	<p>Mahalo for your comments and concerns on the proposed relocation of the PVT ISWMF.</p> <p>The draft EIS will discuss potential impacts to traffic. A project-specific <i>Traffic Impact Assessment Report</i> was prepared for the Proposed Action and will be included as an appendix to the draft EIS. The traffic report concluded that there would not be a significant increase in traffic as a result of the Proposed Action. PVT encourages community members to call their office at 808-668-4561 to report speeding trucks. PVT penalizes speeding drivers and will suspend repeat offenders from the site, if necessary.</p> <p>The draft EIS will also include an alternatives analysis, including alternative landfill locations identified by the City and County of Honolulu. The PVT ISWMF is privately owned and operated. The Project Site is the only location owned by a PVT affiliate and available immediately to PVT for use for the Proposed Action.</p> <p>We will keep you informed of the project's progress, including publication of the draft EIS.</p>

## Kraintz, Franz

---

**From:** Joseph Simpliciano <jks75@icloud.com>  
**Sent:** Monday, February 04, 2019 6:22 AM  
**To:** Kraintz, Franz  
**Subject:** Regards to PVT landfill

Aloha,

Is there anyway to move this out of the westside? This landfill does nothing to help our infrastructure. It creates traffic by non stop semi trucks that speed through nanakuli and also have hit city buses. The roads in nanakuli takes a beating each and everyday. Couldn't they move the landfill to makakilo or closer to honokai Hale? There has to be a better option then putting another landfill on the westside.

Mahalo,  
Joseph k simpliciano  
Sent from my iPhone

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July 9, 2019

Jasmine Torres  
[ahelelanidreams@gmail.com](mailto:ahelelanidreams@gmail.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Environmental Impact Statement Preparation Notice (EISPN)

Dear Ms. Torres:

Thank you for your interest in the PVT ISWMF Relocation Project.

We will keep you informed of the project's progress, including publication of the draft EIS. Your email and this response will be included in the draft EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## Matthew Fong

---

**From:** Karl Bromwell  
**Sent:** Wednesday, February 27, 2019 4:25 PM  
**To:** kahelelanidreams@gmail.com  
**Subject:** Request for 2019 PVT EIS

Aloha Jasmine,

We have received your request. Mahalo for your interest.

Regards,

**Karl Bromwell, REM, CEA, REPA, CISEC**

**Principal Environmental Scientist**

**C: 808.542.4261 | O: 808.587.7747**

Hart Crowser, Inc. | 7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240, Honolulu, HI 96813

[karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)

<https://www.hartcrowser.com/>



*Environmental - Geotechnical - Natural Resources*



87-2020 Farrington Hwy

Waianae, HI 96792

Voice:(808)668-4561 Fax:(808)668-1368

[Mailto:barry@pvtland.com](mailto:Mailto:barry@pvtland.com) Web:<http://www.pvtland.com/>

### CONFIDENTIALITY NOTICE:

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**From:** Jasmine Torres [<mailto:kahelelanidreams@gmail.com>]

**Sent:** Tuesday, February 26, 2019 9:59 PM

**To:** PVT Info <[info@pvtland.com](mailto:info@pvtland.com)>

**Subject:** Request for EIS 2019

Aloha,

May I kindly request a copy of the EIS 2019.

Mahalo,

Jasmine Torres

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## 10 COMMENTS ON THE DRAFT EIS AND RESPONSES

<b>10</b>	<b>Comments on the Draft EIS and Responses .....</b>	<b>1</b>
10.1	Introduction .....	1

### 10.1 Introduction

The Draft EIS was published in the July 23, 2019 issue of the State Environmental Notice. Notice of the Draft EIS was sent to approximately 100 agencies, organizations, and individuals (see Appendix K, Draft EIS Distribution List). Written comments were received from 184 stakeholders (Table 10-1).

**Table 10-1 Agency Comments on the Draft EIS**

<b>U.S. Government (2)</b>
NAVFAC HI in Support of NRH REC and Environmental Compliance
NAVFAC HI Community Planning and Liaison Officer
<b>State of Hawaii (8)</b>
Department of Business, Economic Development & Tourism, Land Use Commission
Department of Hawaiian Homelands
Department of Health, Clean Air Branch
Department of Health, Solid and Hazardous Waste Branch
Department of Land and Natural Resources
Department of Transportation
Office of Hawaiian Affairs
Office of Planning
<b>City and County of Honolulu (7)</b>
Department of Community Services
Department of Design and Construction
Department of Facility Maintenance, Division of Road Maintenance
Department of Parks and Recreation
Department of Planning and Permitting
Honolulu Fire Department
Nanakuli-Mailii Neighborhood Board No. 36
<b>Other Interested Stakeholders and Organizations (14)</b>
Hawaiian Electric Company
Hawaii Teamsters and Allied Workers, Local 996
Hawaii's Technicians for Film, Television, Stage and Projection, Local 665
International Association of Heat and Frost Insulators and Allied Workers, Local 132
International Brotherhood of Electrical Workers, Local 1186
International Longshore and Warehouse Union, Local 142
KAHEA: The Hawaiian-Environmental Alliance

Ke One O Kakūhihewa, Oahu Council of the Association of Hawaiian Civic Clubs
MA'O Organic Farms
Prince Kūhiō Hawaiian Civic Club
Self-Help Housing Corporation of Hawaii
Sierra Club of Hawaii, Oahu Group
United Public Workers Union
Unite Here, Local 5
<b>Community Members – Individual Letters (27)</b>
Douglas Cabinatan
Lily Cabinatan
David Carona
Kapela Eli
Victor Flint
Pohaikealoha George
Carmen Guzman
Azure Dee Paaluhi Kawelo
Kehaulani Kupihea
Alexis Lopez
Jan Makepa
Sanoe Marfil
Poni Napuelua
Aubrey Nera-Carvalho
Yumi O'Connell
Frances L. Paaluhi
Carol Pelekai
Hiram Respicio
Katja Keaokeaawailani Reyes-Lenchanko
Ileana Ruelas
Joseph Simpliciao
Rouel Velasco Danielle Vo'a
Fa'afetai Jeff M. Vo'a
Danielle Vo'a
Leona Watson
Kamuela Werner
Whitney Wong and Gaison Adams
<b>Community Members - Aikea Hawaii Form Letter (13)</b>
Sarina Cabaccang
Darren Ho
Brett Jones
Javier Mendez
Rodney Nakashima



Marisa Nucum
Margaret Primacio
Benton Rodden
Paola Rodelas
Colleen Rost-Banik
Donald Rost-Banik
Lauren Watanabe
Lucia You
<b>Community Members - A'ole Jotform.com Form Letter (85)</b>
Henry Agbayani
Michelle Ah Sam
Sunshine Aiona
Lori Ashley
Christine Auwae
Jasmine Balictar
Jolyn Ballenti
Ryan Benavente
Susan Bowyer
Emma Broderick
Cheri Chai
Len Chai
Liana Cortez-Kekawa
Michael Cuban
Roxanna Davis
Kapela Eli
Kaulana Eli
Danielle Espiritu
Lena Esteban
Peleke Flores
Raynae Fonoimoana
Carmen Guzman-Simpliciano
Ruben A Hanohano Jr.
Shirline Ho
Christine Hooker
Junko Iaela
Joy Inada
Lucille Inada
Roger Inada
Matthew Ing
Chelsey Jay
Jessica Jelf-Albert

Joan Jensen
Christine Kaakau
April Kaawa
Chanel Kaeo
Kanoeanuheia Kahalekai-Willing
Kekuialono Kahele
Kyle Kajihiro
Nancy Kapiko
Azure Kawelo
Brynnner Kekua
Chablos Kekua
Mona Keliinoi
Justin Keliipaakaua
Rawlette Kraut
Christine Laumauna
Jasmine Laupola
Ikaika Lum
Ja Makepa
Jan Makepa
Numela Makinano
Monte McComber
Alexander McNicoll
David Morales
Sean Nagamatsu
Karen Nakasone
Bobbie Nava
Hoaliku O'Connell
Michael O'Connell
Yumi O'Connell
Shane Paris
Joanna Pokipala
Kauai Pratt-Aquino
Lovenna (Hanohano) Robinson
Walter Rodenhust
Kuhi Rowland
Ileana Haunani Ruelas
Ernestine Sabagala
William Sabagala
Deborah Salis
George Siket
Keren Siket

Mark Siket
Joseph Simpliciano
Jayslin Smith
Brandon Tacadena
Laurie Takeno
Samantha Tanuvasa
Bridget Tynanes
Cade Watanabe
Kamuela Werner
Nora Wilson
Hinaleimoana Wong-Kalu
Hoolehua Wright
<b>Community Members – Support Form Letter (28)</b>
Aaliyah I.
Aizayah Beatista
James Joseph
Layden Made
Aariyah-Cheerie Doane
Kili Kekaula
Yvonne Mathewson
Lauren Dolviar
Leolani Mathewson
Roance Lapan
Andre Ramirez
Darrell Holbin
Charleston Silva
Shannon Reriz
Dyland Walain
Reggie Williams
Rhonda Williams
Kyle Valdez
Jeremiah Talbat
Julius Dinony
Stanley Bowen
Pua M.C. Doane
Leslie Balies
Geri Lee Sofa
Alea Ramirez
Keoni Meyers
Bronson Thompson
Rusty Keaulana

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## ***Draft EIS Comment Letters and Responses - Federal***

NAVFAC HI in Support of NRH REC and Environmental Compliance

NAVFAC HI Community Planning and Liaison Officer

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January 10, 2020

John Muraoka  
NAVFAC HI in Support of  
NRH REC and Environmental Compliance  
Code EV13  
Bldg X-11, Ph: 471-4850  
e-mail: [john.muraoka@navy.mil](mailto:john.muraoka@navy.mil)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Muraoka:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. Figure 1-1 is updated in the Final EIS to show that the parcel north of the Project Site, previously owned by Tropic Land, LLC, is now owned by MA'O Organic Farms.
2. Figure 2-3, *Site Development Plan* shows the location and siting for the proposed PV modules and renewable energy systems. PVT will provide the Navy with conceptual renderings of these systems when available.
3. The EIS states that PVT worked with the community to landscape access road shoulder areas outside the property with native plants. PVT periodically waters the landscaping on the access road shoulder along its property boundary and trims as necessary.
4. EIS Section 2.5.3.3, *Stormwater Management (Site-wide)* and 2.5.3.5, *Erosion Control* describes mitigation measures to manage erosion and stormwater run-off from the Proposed Action. No impacts to Lualualei Naval Road are anticipated.
5. EIS Section 2.5.7.1, *Litter Control* and 2.5.7.2, *Dust Control* describes measures to mitigate potential litter and fugitive dust impacts. These measures have proven effective at the existing PVT ISWMF. No impacts to Lualualei Naval Road are anticipated.
6. PVT will adhere to the existing license with the Navy for use of Lualualei Naval Access Road.
7. The Final EIS, Section 2.5.6.5, *Fire Protection* was revised to include: The Federal Fire Department also provides services to the Project Site.
8. PVT hires additional, temporary personnel to collect litter both on and off the site after high winds. This includes the area of Lualualei Naval Access Road along its property boundary.

9. It is noted that PVT is responsible for dust and air quality mitigation generated by the Proposed Action. PVT will obtain approval from the Navy prior to implementing dust and traffic mitigations measures along Lualualei Naval Access Road.
10. PVT will notify the Navy prior to undertaking any power/communication work along Lualualei Naval Access Road.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

-----Original Message-----

From: Muraoka, John T CIV USN NAVFAC HAWAII PEARL (USA) [<mailto:john.muraoka@navy.mil>]

Sent: Monday, September 09, 2019 3:43 PM

To: Krantz, Franz

Subject: Comments on Draft EIS Preparation Notice for PVT Integrated Solid Waste Management Facility (ISWMF) Relocation

Aloha Franz,

As discussed on the phone, the Navy would like to submit the attached comments to the City's Draft EIS Preparation Notice for PVT Integrated Solid Waste Management Facility (ISWMF) Relocation.

We would also like to be kept informed as the EIS preparation and project proceeds.

We appreciate the opportunity to provide a review and comment on the proposed project. We look forward to continuing to work with the City and its consultants as the project proceeds. Please let me know if you have any questions.

John Muraoka

NAVFAC HI in Support of

NRH REC and Environmental Compliance

Code EV13

Bldg X-11, Ph: 471-4850

e-mail: [john.muraoka@navy.mil](mailto:john.muraoka@navy.mil)

[illegible]

January 10, 2020

Victor M. Flint  
Community Planning & Liaison Officer  
Naval Facilities & Engineering Command  
Hawaii Joint Base Pearl Harbor-Hickam  
Hawaii 96860-3139  
808-449-3164  
e-mail: [victor.m.flint@navy.mil](mailto:victor.m.flint@navy.mil)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Flint:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

PVT thanks you for your continued commitment and collaboration to address issues related to Lualualei Naval Road, including fugitive dust, erosion, noise, litter, area beautification, road repair, and area criminal activity reduction.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Flint, Victor M CIV (USA) [victor.m.flint@navy.mil]  
Sent: Thursday, September 05, 2019 9:31 PM  
To: Kraintz, Franz  
Subject: PVT Land Expansion

Hi Frank,

This is not an endorsement of the PVT Expansion in Nanakuli.  
It is just a memo to you about our (Navy) workings with PVT.  
Navy has regular discussions with Albert (Pres), Ben (VP) & Steve (VP Engr).  
PVT & Navy has worked together to help Mitigate & Reduce;

- \* Migrant Dust
- \* Dirt Erosion
- \* Noise Reduction
- \* Rubbish Clean-Ups
- \* Area Beautification
- \* Lualualei Road Repair
- \* Area Criminal Activity Reduction

All of the above projects are on Lualualei Naval Road.  
Also, because PVT uses their equip & manpower, there is no cost to the taxpayer.  
PVT is a huge asset to our Federal, State & City Gov as well as our local Leeward Community.

The push-back from the Nanakuli Community is based mostly on perception, not facts.  
Dust, Cultural and Health concerns are what most of the push back issues are.  
All have been addressed in numerous reports by State Dept of Health and other agencies.  
Be advised there are many in the community that support the PVT Expansion.  
Hopefully you will get their submittals by the deadline.

Again, this is no endorsement ... just sharing factual info with my DPP Brother.  
Anything you need from me on this ... just let me know.

V/r,

Victor M. Flint  
Community Planning & Liaison Officer  
Naval Facilities & Engineering Command Hawaii Joint Base Pearl Harbor-Hickam Hawaii 96860-3139  
808-449-3164



## ***Draft EIS Comment Letters and Responses - State of Hawaii***

Department of Business, Economic Development & Tourism, Land Use Commission

Department of Hawaiian Homelands

Department of Health, Clean Air Branch

Department of Health, Solid and Hazardous Waste Branch

Department of Land and Natural Resources

Department of Transportation

Office of Hawaiian Affairs

Office of Planning

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January 10, 2020

Daniel E. Orodenker  
Executive Officer  
Land Use Commission  
Department of Business, Economic Development & Tourism  
State of Hawaii  
235 S. Beretania Street, Suite 406  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Orodenker:

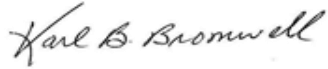
Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. LUC Docket no. A71-275 concerned the reclassification of a parcel (currently TMK: 8-7-009:025 and TMK: 8-7-021:026) from the State Agriculture District to State Urban District in 1971 to develop affordable housing. The parcel in Docket no. A71-275 is the location of the current PVT ISWMF (see enclosed approved boundary map). This parcel was purchased by PVT Land Company in 1989. The proposed Project Site (TMK: 8-7-009:007) does not include or encroach on the parcel in Docket no. A71-275. The Special Use Permit (SUP) application will discuss historic land uses and land use entitlements of the Project Site.
2. The applicant is aware that the new Land Use Commission (LUC) Rules went into effect on October 18, 2019. PVT's SUP application will address the project's compliance with the LUC Rules, as revised.
3. A SUP is required for the Proposed Project. PVT will submit the SUP application to the Department of Planning and Permitting upon acceptance and publication of the Final EIS. The application will discuss compliance with the LUC Rules, as revised on October 18, 2019.
4. EIS Section 5.1, *Archaeological and Historical Resources* and Section 5.2, *Cultural Resources* describe historic land uses on the Project Site. The SUP application will discuss historic land uses and land use entitlements of the Project Site. The Project Site was not considered for an affordable housing development in 1971 (See response No. 1).
5. You note that Article XII, Section 7 of the Hawaii Constitution obligates the State Land Use Commission to protect the reasonable exercise of customarily and traditionally exercised rights of native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries. The applicant is not petitioning for a reclassification of a district boundary. EIS Section 5.2, *Cultural Resources* of the EIS and the *Cultural Impact Assessment* (Appendix H)

document that no traditional and Native Hawaiian cultural practices are exercised on the Project Site and that the Proposed Project would not have a significant impact on cultural resources, practices, or places in the vicinity of the Project Site.

We appreciate your participation in this review process. Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

September 20, 1971

GORO INABA

EDDIE TANGEN

TATSUO FUJIMOTO

Mr. Roy Takeyama  
Attorney at Law  
Suite 223  
33 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Takeyama:

The Land Use Commission, at its meeting on September 17, 1971 approved the amendment of approximately 178.6 acres from the Agricultural District into the Urban District at Lualualei, Waianae, Oahu, identifiable by Tax Map Key 8-7-09: portion of 3, and 8-7-21: portion of 26 (see map attached), on the petition by Oceanview Ventures (A71-275).

Prior to taking action on this petition, the enclosed memorandum was presented to the Commission.

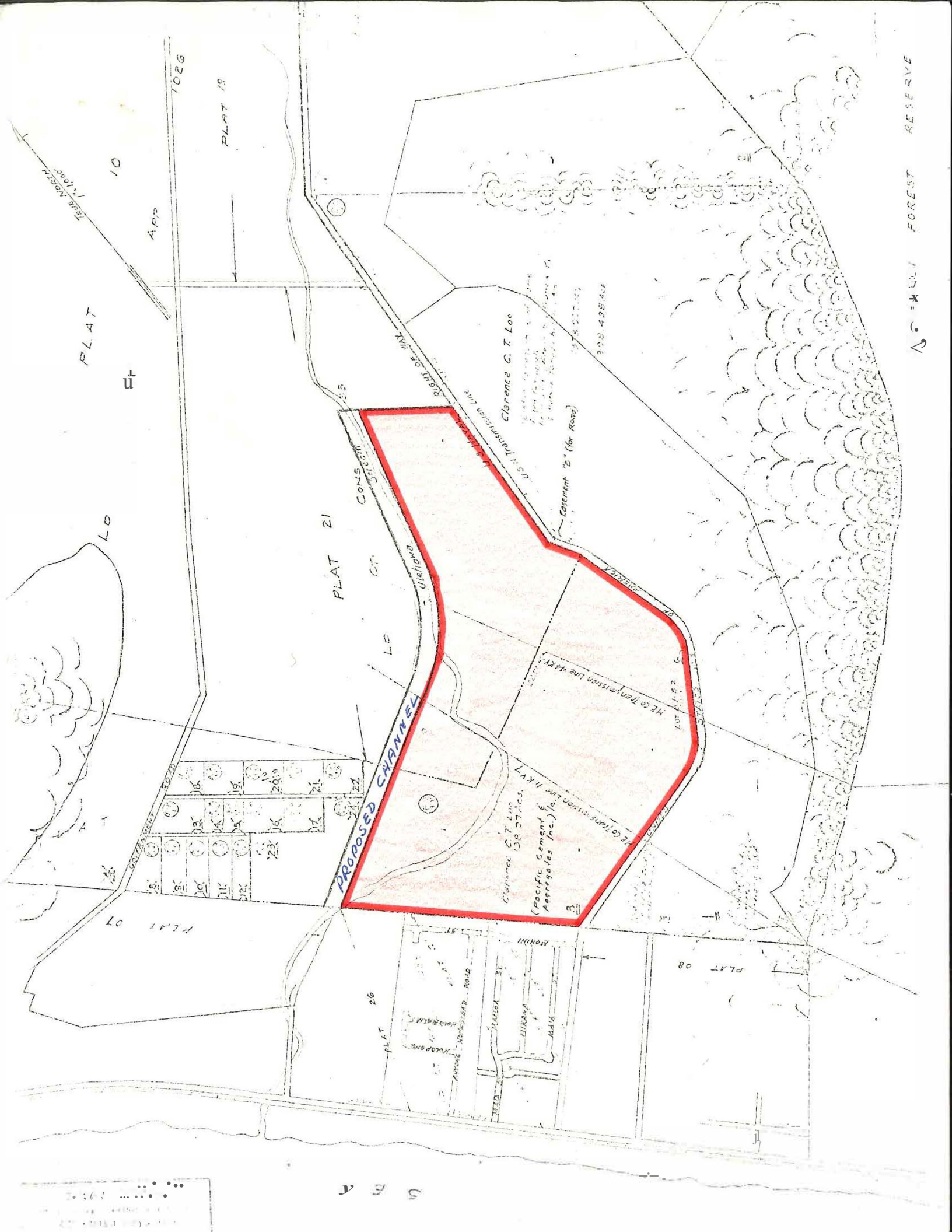
For your information, we are enclosing herewith a copy of Section 2.33, "Performance Time", of the Rules and Regulations of the Commission.

Very truly yours,

TATSUO FUJIMOTO  
Executive Officer

Enclosures

cc: City Planning Department  
Property Assessment, Dept. of Taxation  
Property Technical Services, Dept. of Taxation  
Tax Maps Recorder, Dept. of Taxation  
Planning Office, DLNR  
Chairman of the Board, DLNR  
Facilities & Auxiliary Svcs. Br., DOE  
Department of Transportation  
Board of Water Supply  
Water Sales Division, Bd. of Water Supply  
Planning Division, DPED  
Planning Branch, DAGS  
Land Use Commission  
Building Dept., C & C of Honolulu



DAVID Y. IGE  
Governor

MIKE MCCARTNEY  
Director



DANIEL E. ORODENKER  
Executive Officer

**LAND USE COMMISSION**  
Department of Business, Economic Development & Tourism  
State of Hawai'i

October 29, 2019

Karl Brownmwell,  
Hart Crowser, Inc.  
Water Front Plaza,  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, HI 96813

Kathy Sukugawa  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

Subject: Draft Environmental Impact Statement (DEIS)  
PVT Integrated Solid Waste Management Facility Relocation

Dear Mr. Brownmwell,

We have reviewed the Draft Environmental Impact Statement (DEIS) for PVT Integrated Solid Waste Management Facility Relocation, received on July 23, 2019, and have the following comments.

1. The applicant should discuss the area reclassified from the State Agricultural District to the State Urban District on September 17, 1971 to develop affordable housing LUC Docket no A71- 275.
2. The applicant should be aware that new LUC Rules went into effect on October 18, 2019.
3. The Applicant should discuss whether a State Special Permit would be required and already submitted to the County and how the new LUC rules will apply.
4. The applicant should provide a history and background of the Area to explain how this land area has gone from an affordable housing development site to the current and proposed uses.
5. The FEIS should provide a Ka Pa'akai analysis and address HRS §225 P-5(b).



DAVID Y. IGE  
Governor

MIKE MCCARTNEY  
Director



**LAND USE COMMISSION**  
Department of Business, Economic Development & Tourism  
State of Hawai'i

DANIEL E. ORODENKER  
Executive Officer

Thank you for the opportunity to comment on the subject DEIS. Should you have any questions, please do not hesitate to contact our office at (808)-587-3822.

Sincerely,

Daniel E. Orodener  
Executive Officer

CC: Rodney Funakoshi,  
Office of Planning

January 10, 2020

William J. Aila Jr.  
Chairman, Hawaiian Homes Commission  
State of Hawaii Department of Hawaiian Home Lands  
P.O. Box 1879  
Honolulu, Hawaii 96805

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Aila:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. The Project Site is not located on Hawaiian Home Lands trust lands and therefore the DHHL plans are not applicable to the Proposed Action. We understand that the plans you provided are part of the DHHL's 3-tiered Planning System applicable to DHHL and its property. As explained in the first tier General Plan (2002) you referenced, your "mission is to manage the Hawaiian Home Lands trust effectively." As explained in the second tier Oahu Island Plan (2014) (OIP), the OIP was developed to provide recommendations for future uses of the Department of Hawaiian Home Lands' 8,154 acres on Oahu. As explained in the third tier regional plans you referenced (2010, 2009, 2018), the regional plans guide homestead, Departmental and Commission actions in a region. While the Final EIS does not specifically address conformance and consistency with the plans you list, EIS Section 6, *Conformance with Land Use Plans, Policies and Controls*, addresses consistency with similar plans to manage state and regional land use planning, protect natural, historic, cultural, and community resources, provide opportunities for economic development, and protect the health of the community.

The Final EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristic* addresses potential impacts to current and future land uses in the vicinity of the Project Site, which includes land uses on DHHL-owned parcels. The Proposed Action would be compatible with current and future land uses and is not expected to encourage or discourage changes in land use in the Waianae Region.

We appreciate the information provided in the plans you referenced, and we have updated several sections of the Final EIS to include your input. The following edits were made to the Final EIS to address this comment (text changes underlined in red):

Section 5.3.2.5, *Land Use Characteristic, Land Uses in the Vicinity of the Project Site*

In addition to the land uses described above, there are six DHHL-owned parcels in the

vicinity of the Project Site (Figure 5-10):

- Princess Kahanu Estates
- Nanakuli Hawaiian Homestead
- Nanakuli Upper Valley
- Nanakuli Village Center
- Former Nanaikapono School Site
- Nanakuli Ranch

Section 5.3.2.5, *Land Use Characteristic, Planned Land Uses*

This section assesses potential land use in the vicinity of the Project Site. Planned land development projects are listed in Table 5-10 and shown on Figure 5-9.

~~Six of the eight projects would be adjacent, in part, to the Project Site. Nanakuli Village Center (#3) and the Leeward Bikeway (#4) would not be adjacent to the Project Site (Figure 5-9).~~

Four of the projects are priority projects in DHHL's *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nanakuli* (2009): Nanakuli Village Center (#3), Street Repairs and Maintenance for Health and Safety in the Region (#9), Farrington Highway Transportation Corridor Coordination and Improvements (#10), Cemetery Repair and Expansion (#11), and Identify and Plan Community Use Areas (#12).

The following additions were made to Table 5-10: Planned Land Use Changes and shown on Figure 5-9.

#	Project Name and Description	Type	Status	Proponent
<u>9</u>	<u>Street Repairs and Maintenance for Health and Safety in the Region<sup>9</sup>. Improvements to crosswalks, sidewalks and other measures to improve pedestrian safety within DHHL homesteads and along Farrington Highway.</u>	<u>Transportation</u>	<u>In progress.</u>	<u>DHHL</u>
<u>10</u>	<u>Farrington Highway Transportation Corridor Coordination and Improvements<sup>9</sup>. DHHL coordination of ongoing Farrington Highway corridor improvements.</u>	<u>Transportation</u>	<u>In progress.</u>	<u>DHHL</u>
<u>11</u>	<u>Cemetery Repair and Expansion<sup>9</sup>. Planning and development of the new site for the Nanakuli Cemetery.</u>	<u>Community</u>	<u>In progress.</u>	<u>DHHL</u>

#	Project Name and Description	Type	Status	Proponent
12	<u>Identify and Plan Community Use Areas<sup>9</sup>. Planning to identify community use areas.</u>	<u>Community</u>	<u>In progress.</u>	<u>DHHL</u>

Sources: 1) Nanakuli-Mailii Neighborhood Board 2018. 2) KITV 4 2016. 3) Hawaii Community Development Board 2018. 4) Hawaii Bicycling League 2018. 5) KITV 4 2017. 6) CCH 2019b. 7) Nanakuli-Mailii Neighborhood Board 2019. 8) CSH 2019. 9) DHHL 2009.

#### Section 5.3.3.1, *Proposed Action, Land Use Characteristic*

The Proposed Action would be compatible with ~~adjacent current~~ and future land uses **in the vicinity of the Project Site** and is not expected to encourage or discourage changes in land use in the Waianae Region.

2. The EIS addresses potential impacts to the community, which includes DHHL beneficiaries.

Section 3.5, *Air Quality* summarizes five human health risk assessments for PVT ISWMF operations (available on the PVT website: <http://www.pvtland.com/air-quality-studies/>). Potential health risks (carcinogenic and noncarcinogenic) via inhalation were estimated for PVT employees and hypothetical adult and child residents who live a quarter mile downwind of operations at PVT ISWMF. The reports conclude that fugitive dust does not pose a health concern to PVT employees or residents downwind of PVT operations.

Section 3.6, *Noise* summarizes the *Environmental Noise Assessment Report* (Appendix D) prepared by D.L. Adams for the Proposed Action. The report concludes that noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or “just barely perceptible”).

Section 5.3, *Socioeconomic Resources and Land Use Characteristic* concludes that the Proposed Action would be compatible with current and future land uses in the vicinity of the Project Site and is not expected to encourage or discourage changes in land use in the Waianae Region.

See our response to comment #1 on how we’ve addressed DHHL priority projects in the Final EIS.

3. As described in EIS Section 4.2, *Transportation*, the PVT ISWMF currently accepts up to 300 haul trucks per day. No increase in these limits are proposed or anticipated with the Proposed Action. As PVT operations are relocated, truck and employee traffic would shift from the PVT ISWMF to the Proposed Site on opposite side of Lualualei Naval Road.

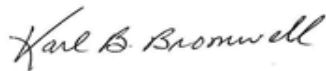
Without the Proposed Action, PVT ISWMF operations would slow (300 waste truck trips would be reduced to 150) and fewer employees (reduced from 80 to 57) would be required in the final years of the PVT ISWMF operations.

Section 4.1.3., *Impacts* described potential impacts to traffic with and without the Proposed Action when compared to existing conditions. Under the Proposed Action, there would be a less than significant adverse impact on Farrington Highway roadway traffic and the intersection with Lualualei Naval Road. The frequency of road repair would not significantly change from current conditions. Without the Proposed Action, there would be a long-term beneficial impact on traffic conditions.

4. Nanakuli Elementary School, Nanakuli Intermediate and High School, Ka Waihona o ka Naauao, and Nanaikapono Elementary School are outside of the Noise Contour Maps boundaries (Figure 3-23 and Appendix D). Noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or “just barely perceptible”). Noise impacts would diminish the further the receptor is from the Proposed Action and noise would not be perceptible at schools in the surrounding area.
5. As you note, the method used to collect air samples is in compliance with EPA methods. The principal reason that we collect 24-hr samples is for comparison with the National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) which are intended to protect public health. There are no PM NAAQS for sampling times less than 24 hours. This method does not have “systemic errors.” The collection of multiple samples over a single 24-hour period would not increase data accuracy. The data presented are accurate.
6. Thank you for your suggestions. PVT’s EIS consultation efforts included: presentations at the January and July Nanakuli-Maili Neighborhood Board (NB) Meetings; attendance at the August Nanakuli-Maili NB Meeting and September 4, 2019 special meeting to hear testimony from 70+ individuals and organizations; and a community day for residents to tour the PVT ISWMF site and learn about the Proposed Action. Cultural Surveys Hawaii also consulted with Native Hawaiian Organizations for the project-specific *Cultural Impact Assessment*. Among the associations consulted were representatives from DHHL, Ahupuaa O Nanakuli Homestead Association, State Council of Hawaiian Homestead Associations, Princess Kahanu Estates Association, and Waianae Kai Hawaiian Homestead Association. Details on their outreach efforts are provided in the EIS Appendix H.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS. Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

# Nānākuli Hawaiian Home Lands



## DHHL PARCELS

### A Princess Kahanu Estates

- 270 single-family residences on 53 acres; approximate population of 1,173

### B Nānākuli Hawaiian Homesteads

- 1,040 single-family residences on 260 acres; approximate population of 5,100

### C Nānākuli Upper Valley

- 1,126 acres, currently leased and used by Lyman Ranch
- TMK 8-9-08:03

### D Future site of Nānākuli Village Center

- 13.65 acres owned by DHHL, located east (Honolulu side) of drainage ditch; land located on western side of ditch is owned by DOE, site of the new Nānākapono Elementary School
- Backbone infrastructure is currently under construction at Nānākuli Village Center
- TMKs 8-9-02:01 and 8-9-02:76

### E Former Nānākapono School Site

- TMK 8-9-01: 04
- 17 acres currently leased to 9 different organizations:
  - Honolulu Community Action Program Inc. (HCAP)
  - Wai'anae Coast Early Childhood Services Inc.
  - Ka Waihana O Ka Na'auao Charter School
  - Kamehameha Schools
  - INPEACE
  - His Highest Praise Westside Church
  - The Pacific American Foundation
  - 'Aha Punana Leo Properties Manager
  - Caretaker: Charlie Sakurai

### F Nānākuli Ranch

- 448 acres currently leased and used by the Rapoza family
- TMK 8-9-07:02

**TOTAL:**

- 1,310 single-family residences
- 1,916.65 acres
- Approximate population of 6,273

## DHHL Parcels in the Vicinity of the Project Site

PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii





STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879  
HONOLULU, HAWAII 96805

September 5, 2019

In reply refer to: PO-19-155

Mr. Karl Bromwell  
Hart Crowser, Inc.  
eis@pvtland.com  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, Hawai'i 96813

Dear Mr. Bromwell:

Subject: Draft Environmental Impact Statement for the PVT Integrated Solid Water Management Facility Relocation, TMK (1) 8-7-009:007

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, the project is located in the vicinity of DHHL's Wai'anae Moku land holdings, as identified in the O'ahu Island Plan. DHHL offers the follow comments:

1. DHHL Lands-

DHHL has land holdings of approximately 4,780 acres in the Wai'anae Moku. DHHL has developed a three-tiered planning system to guide planning of its land holdings and policies for resource management. The system includes an over-arching General Plan, Island Plans, and Regional Plans. Chapter 6, "Conformance with Land Use Plans, Policies and Controls," of the Draft Environmental Impact Statement (draft EIS) does not include an evaluation of the project's conformance to nor consistency with the *Waianae and Lualualei* (2010) Regional Plan, *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nānākuli* (2009), the *O'ahu Island Plan* (2014), nor the *General Plan* (2002).

DHHL recommends assessing proposed project's impact on Hawaiian Home Lands in the Wai'anae Moku as well as conformance with DHHL's land Use plans, policies and controls.

DHHL recommends assessing the proposed project's impacts on DHHL's ability to implement the *Waianae and Lualualei* Regional Plan, *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nānākuli* and the *O'ahu Island Plan*.



2. DHHL Beneficiaries-

There are 1,946 DHHL lessees with homesteads within the Wai'anae Moku. The project as proposed is situated between two DHHL homestead communities, Princess Kahanu Estates to the west with 271 homesteads and Nānākuli with 1,047 homesteads. The project is less than one mile from both communities. The remaining DHHL lessee homesteads are located more than 1 mile west of the project.

During DHHL's regional planning consultation process for *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nānākuli*, beneficiaries indicated that landfills (PVT and Waimanalo Gulch) impact both the Hawaiian homesteads and the cultural heritage pertaining to Maui as a regional issue.

DHHL recommends assessing the proposed project's impact to DHHL's beneficiaries. It should include an assessment of the impacts the proposed project will have on DHHL beneficiaries' ability to implement the priority projects identified in the *Waianae and Lualualei Regional Plan* and *The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nānākuli*.

3. Traffic and Roadway infrastructure Impacts-

As proposed, the project will double the number of waste haul trips per day over the 2030 no-action alternative. The project will result in a level of service reduction to undesirable and unacceptable along Lualualei Naval Road-Farrington Highway during peak hours. Section 4.1.3 only looks at the increase in total number of vehicles not the composition of vehicles when determining the level of impact. Waste haul trucks have a different level of impact on roadway infrastructure and the amount of physical space they take up while queuing at intersections than a personal car or truck. Doubling the number of waste haul trucks can be expected to increase roadway repair frequency which could affect traffic along the only access route into the Wai'anae Moku.

DHHL recommends an evaluation of the the impact doubling the number of trucks will have on resurfacing frequency and its secondary effect on traffic.

4. Noise, Vibration, and Odor Impacts-

Chapter 2.5.7.6, Noise Control, identifies policies to minimize noise impacts to sensitive receptors. DHHL assumes that school age children are considered sensitive receptors. The draft EIS identifies three public/public-charter schools as being located less than 1 mile from the project site in the emergency shelter section. The draft EIS does not include private schools located within one mile of the project site.

Chapter 3, Noise, does not identify the location of sensitive receptors to the proposed project area nor the noise and vibration impacts the project will have on these receptors.

Schools are allowed within various zoning designations, and the impact on existing schools was not evaluated. As proposed, the project will double the number of waste haul trips per day over the 2030 no-action alternative. This will affect noise, air emissions, and odor.

The draft EIS indicates that 75% of waste haul truck traffic will occur during daytime, non-peak traffic hours. The PVT hours of operation 7:00 am to 4:30 pm (3:00pm for last trucks) overlaps with the hours public schools are typical in session (8:00am to 2:00 pm). There are multiple schools within one mile of the proposed facility that will be impacted by increased daytime noise, vibration and odor levels. Based on the location of the proposed project between two Hawaiian Homestead communities, many students at these nearby schools are the children of DHHL beneficiaries.

DHHL recommends existing public and private schools near the project be identified on noise level contour maps included in Appendix D.

5. Air Quality-

Chapter 3.5.2.3, Air Quality at the Project Site, describes the methodology for assessing particulates and fugitive dust at the existing PVT site as a 24-hour collection period. This method of data collection is in compliance with state and federal ambient air quality standards. However, according to the draft EIS, the PVT facility is in operation for a maximum of 9.5 hours or 40% of any 24-hour period. Forty percent of respondents to the Department of Health's 2011 Dust Survey (included in the Draft EIS Appendix C) indicated most of the dust occurs in morning or afternoon while only three percent indicated it occurred at night. The survey results closely match PVT's hours of operation. Due to its proximity to residences and schools, the collection of multiple air emission samples over a 24-hour period that more closely matches PVT's operational hours may increase data accuracy by removing systemic errors.

6. Cultural and Natural Resources, Access and Other Rights of Native Hawaiians-

The proposed project has the potential to impact DHHL's beneficiaries in Wai'anae Moku.

DHHL recommends consultation with Hawaiian Homestead community associations and other (N)ative Hawaiian organizations when preparing DEIS to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians. A list of some of our DHHL homestead associations may be found at <https://dhhl.hawaii.gov/homestead-associations/>.

NAME: MR. BROMWELL  
DATE: SEPTEMBER 5, 2019  
PAGE: 4 OF 4

Mahalo for the opportunity to provide comments. If you have any questions, please call Malia Cox, at 620-9485 or contact via email at [malia.m.cox@hawaii.gov](mailto:malia.m.cox@hawaii.gov).

Aloha,



William J. Aila Jr., Chairman  
Hawaiian Homes Commission

- c: Franz Kraintz- Department of Planning and Permitting, 650 South King Street, 7<sup>th</sup> Floor,  
Honolulu, Hawai'i 96813  
Princess Kahanu Estates Hawaiian Homes Association via email  
Nānākuli Hawaiian Homestead Community Association via email



87-2020 Farrington Highway ■ Waianae, Hawaii 96792 ■ Tel: 808 668-4561 ■ FAX: 808 668-1368 ■ Website: www.pvtland.com

July 19, 2019

Aloha:

PVT Land Company, LTD (PVT) prepared a Draft Environmental Impact Statement (EIS), pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

TITLE OF PROJECT: PVT Integrated Solid Waste Management Facility Relocation

LOCATION: ISLAND Oahu DISTRICT Waianae

TAX MAP KEY NUMBER: (1) 8-7-009:007

AGENCY ACTION: \_\_\_\_\_ APPLICANT ACTION: X

PROJECT SUMMARY: Attached

**REVIEW THE DEIS ONLINE AT:** [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2019-07-23-OA-DEIS-PVT-ISWMF-Relocation.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2019-07-23-OA-DEIS-PVT-ISWMF-Relocation.pdf), or [www.pvtland.com](http://www.pvtland.com).

Note that the link will not be active until the date of publication on July 23.

**YOUR COMMENTS MUST BE RECEIVED OR POSTMARKED BY: September 6, 2019.**  
(45-day comment period)

**PLEASE SEND ORIGINAL COMMENTS TO THE:**

CONSULTANT: Hart Crowser, Inc.  
ADDRESS: 7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Karl Bromwell / (808) 587-7747  
EMAIL: [eis@pvtland.com](mailto:eis@pvtland.com)

**COPIES OF THE COMMENTS SHOULD BE SENT TO THE FOLLOWING:**

ACCEPTING  
AUTHORITY: Department of Planning and Permitting  
ADDRESS: 650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Franz Krintz, AICP / (808) 768-8046  
EMAIL: [fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

DEPARTMENT OF PLANNING AND PERMITTING  
SUMMARY PROJECT DESCRIPTION

APPLICANT/LANDOWNER :	PVT Land Company, Ltd. (PVT)/Leeward Land Company, Ltd., and affiliate of PVT.
AGENT :	Hart Crowser, Inc.
APPLICANT'S PROPOSAL & BASIS FOR REQUEST :	<p>The purpose of the proposed action is for PVT to provide uninterrupted construction and demolition (C&amp;D) waste management for Oahu by relocating their existing operations to an adjacent location. The existing PVT C&amp;D waste management facility is the only commercial facility available for public use on Oahu and is beginning closure per its approved Closure Plan. The proposed project will satisfy Oahu's continued need for a C&amp;D landfill and recycling facility as well as disaster debris processing.</p> <p>PVT proposes to (1) relocate its C&amp;D debris receiving, recycling, and disposal operation to a parcel on the opposite side of Lualualei Naval Road from its current location, (2) upgrade its recycling operations by installing two materials recovery and processing lines, and (3) install renewable energy facilities (gasification unit or anaerobic digestion unit and photovoltaic panels) to power its operations.</p>
LOCATION :	The project site is on the east side of Lualualei Naval Road, opposite the existing PVT C&D waste management facility.
TAX MAP KEYS (TMK) :	8-7-009: 007
LAND AREA :	179.109 undeveloped acres.
STATE LAND USE DISTRICT:	Agricultural District.
SUSTAINABLE COMMUNITIES PLAN AREA :	Waianae.
SUSTAINABLE COMMUNITIES: PLAN LAND USE MAP	Agriculture.
EXISTING ZONING :	AG-2 General Agricultural District.
SPECIAL DISTRICT :	The project site is not within a Special District.

SHORELINE SETBACK/ SPECIAL MANAGEMENT AREAS	:	The project site is outside the Shoreline Setback and outside any Special Management Area.
EXISTING USE	:	Mostly undeveloped apart from one non-potable brackish industrial supply well, one PVT groundwater monitoring well, and two 25,000-gallon non-potable brackish water storage tanks, all of which are used for PVT operations.
SURROUNDING LAND USES	:	<p>Uses surrounding the project site include:</p> <p>1) North and East: Undeveloped and naturally vegetated Puu Heleakala (TMK 8-7-009: 001). Beyond the ridgeline is the Nanakuli Residential Lots subdivision.</p> <p>2) South: Residential developments of the Nanakuli/Lualualei community.</p> <p>3) West: Lualualei Naval Road delineates the western boundary. Directly across of Lualualei Naval Road are the PVT Integrated Solid Waste Management Facility (TMK 8-7-009: 025 and 8-7-021: 026) and West Oahu Aggregate industrial facility (TMK 8-7-021: 035). Further west beyond Ulehawa Stream, are low-density residential and agricultural properties.</p>

January 10, 2020

Mr. Barry Ching  
Clean Air Branch  
State of Hawaii Department of Health  
2827 Waimano Home Rd. Room 130  
Pearl City, HI 96782

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Ching:

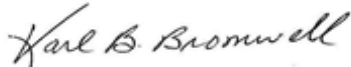
Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. Air Pollution Control Permit: Some of the equipment that are part of the Proposed Action may require a Noncovered Source permit. PVT will coordinate with the Department of Health Clean Air Branch Permitting Section to obtain the necessary permit(s).
2. Includes construction or demolition activities that involve asbestos: The PVT ISWMF has long been the only facility on Oahu permitted to accept asbestos containing materials (ACM) for disposal. PVT would continue to accept double-bagged ACM at the existing PVT ISWMF until final grades within this area are achieved, at which time PVT will no longer accept ACM. No ACM disposal area is proposed for the Proposed Action.
3. Has the potential to generate fugitive dust: The Proposed Action has the potential to generate fugitive dust. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). EIS Section 3.5, *Air Quality* summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. Section 2.5.7.2, *Dust Control* discusses dust control measures, including those listed in the Department of Health Clean Air Branch standard comments.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



## Kayla Yost

---

**To:** Kraintz, Franz  
**Subject:** RE: Comments on Draft EIS for PVT ISWMF Relocation Project

**From:** Cab General [<mailto:Cab.General@doh.hawaii.gov>]  
**Sent:** Monday, August 12, 2019 10:55 AM  
**To:** Kraintz, Franz; [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)  
**Subject:** Comments on Draft EIS for PVT ISWMF Relocation Project

Hi

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.

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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 <a href="mailto:cab@doh.hawaii.gov">cab@doh.hawaii.gov</a>	Indoor Radiological Health Branch (808) 586-4700
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April 1, 2019

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January 10, 2020

Lene Ichinotsubo, P.E., Acting Chief  
Solid and Hazardous Waste Branch  
State of Hawaii Department of Health (HDOH)  
P.O. Box 3378  
Honolulu, HI 96801

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Lene Ichinotsubo:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

1. With regard to the gasification unit, PVT's feedstock is a product, it is not a solid waste. In addition, the ash from the gasification unit is not a solid waste if it can be beneficially used. We enclose with this letter an article that recently appeared in Biomass Magazine. As reported, there are many markets for biochar, the byproduct of gasification. Both of these determinations were made in PVT's current Solid Waste Management Permit.
2. As noted above, PVT's feedstock is a product, not a solid waste. HDOH has issued a permit allowing a gasification unit. PVT's Solid Waste Management Permit application will discuss the anaerobic digestion process.
3. PVT will address the design of the landfill liner and leachate collection and management systems in their Solid Waste Management Permit application.

PVT looks forward to discussing these and other concerns of the HDOH Solid and Hazardous Waste Branch during the permit process.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## Source

[Biomass Magazine](#)

## Publication Date

September 4, 2019

Markets for biochar, most commonly produced as a gasification or pyrolysis byproduct, are expanding.



Aries Clean Energy gasification plant at Lebanon, TN

By Kathleen Draper, U.S. Director, Ithaka Institute for Carbon Intelligence

When you ask someone if they have heard about biochar, more often than not, you will get a quizzical stare. Fortunately, though, this is beginning to change, as the variety and scale of potential markets for biochar continues to expand.

Biochar is one of the products produced from thermochemical conversion (TC), the baking of organic material using little or no oxygen. TC can, depending on the particular technology used, also generate heat, electricity, bio-oil and wood vinegar. It is increasingly viewed as a cost-effective option for diverting and reducing organic materials currently sent to landfills, which is beginning to take on increased urgency as landfills fill up and organics mandates are adopted by more and more states. Depending on the temperatures used, volume reduction of 75 to 95 percent can be achieved. Imagine reducing a gallon of biomass to a quart (75 percent reduction) or a cup (93.8 percent reduction). Unlike incinerated material, however, the leftover solids do not have to be shipped off as toxic waste. On the contrary, the highly stable carbon material can be used to improve soils, purify water, reduce flooding, remediate brownfields, harvest excess nutrients, lighten up concrete as well as a host of other applications.

The type of biomass being carbonized has a significant impact on the properties of the resulting biochar, as does the temperature, hold time, and technology used to convert the biomass. As an example, research has shown that woody biomass tends to have high carbon, but low nutrient

content. Manures and sewage sludge, on the other hand, have lower carbon but higher nutrients. Other variable properties that impact end use and performance include surface area, bulk density, pH, electrical conductivity, nutrients and heavy metals. Increasingly, biochar producers are learning how to produce “fit for purpose” biochars by varying the organic material, processing parameters, and optimizing pre or post processing to adjust the chemical, biological, physical and electrical properties.

A commonly posed question is “What is the difference between charcoal and biochar?” Many use the words interchangeably. Generally speaking, charcoal is used for energy production, whereas biochar is a term used to refer to high-carbon, charred materials that are not subsequently burned but are added to soils or other long-lived products with a goal of preventing the carbon from returning to the atmosphere. Recently, biochar was highlighted as one of only six negative emissions technologies recognized by the Intergovernmental Panel on Climate Change as providing significant opportunity for mitigating climate change. Charcoal is most often made from wood or woody byproducts, while biochar can be made from a much broader range of organic materials including crop residues, food waste, digestate, manures, seaweed, invasive species, and, of course, wood. Another difference is the processing temperature. Yields for charcoal are generally higher than biochar due to lower temperatures. This maximizes heating value but produces carbon with lower surface area and more volatiles.

The most common TC technologies used to produce biochar are pyrolysis (no oxygen) or gasification (limited oxygen). However, a much broader array of technologies, some ancient, some cutting-edge, can be used. Perhaps the oldest technique is a kiln that has been used for millennia to produce charcoal as well as bricks, pottery and more. Hydrothermal carbonization, which works well with high-moisture feedstock is one of the newer carbonization technologies.

One of the better-known combined-heat-and biochar projects is known as the Stockholm Biochar Project. An initial pilot plant used a pyrolysis technology from Germany (Pyreg GmbH) to convert green waste from the city into heat that was utilized in the district heating system, and biochar that was used for urban tree planting and stormwater management. Based on the success of the pilot, the system is being replicated in other cities in Sweden, Europe and beyond.

Electricity production via gasification with a biochar byproduct can be found at a growing number of installations. Since 2016, Aries Clean Energy has been running a plant in Tennessee that provides electricity to a nearby wastewater treatment facility. This power is generated using wood waste that was previously sent to landfills. The plant can annually produce 1,000 tons of consistent, high-carbon biochar that meets the International Biochar Initiative standards for use in soils. **Editor’s note: Aries GREEN™ Biochar holds both International Biochar Institute and USDA certifications. For more info: <https://ariescleanenergy.com/biochar/biochar-sales/>**

Syncraft, an Austrian company making gasification equipment, has units that provide enough electricity for a small village, and the ability to vary biochar output according to market conditions. The biochar produced in their European locations is of sufficiently high quality that it is sold as an animal feed additive (something which is not currently legal in the U.S., though many in the industry are working to change this). Oregon Biochar Solutions and Pacific Biochar both promote products which result from biomass to energy production.

One of the original markets for biochar was agriculture. This still remains a large market, though the economics can be challenging in certain farming scenarios. The impact biochar has on soils and different crops is inconsistent, as it tends to have a greater yield-boosting impact on poorer soils and in regions where it is difficult to build a deep organic soil layer. Promising ag markets for biochar must necessarily focus where the economic impact is higher than the cost of biochar. In drought-challenged areas where farmers pay for water, biochar can help improve water management. In certain types of perennial agriculture, biochar use can get trees into fruit or nut production earlier. As certain types of biochar can reduce plant uptake of metals, biochar use could mean the difference between being able to market your products or not when farmers find they have toxic soils.

Much of the more recent focus for biochar has been nonagricultural markets where activated carbon (AC) has traditionally been used such as filtration, remediation, animal feed and more. Biochar can often compete effectively with AC from a cost perspective. It is now being looked at as a replacement for carbon black which is used as a filler and dye in various types of plastics and in tires.

Currently, perhaps one of the biggest markets by volume in the U.S. is composting. While some may perceive biochar to be competitive with composting, the two are actually synergistic. Adding 10 to 20 percent biochar in the early stages of composting can reduce processing time, increase heating temperatures which kills off more pathogens or weed seeds, retain more nutrients and boost long-term carbon content, all of which translates into high-value compost.

Another high-volume, though low-value market that is beginning to emerge is in livestock farming. Biochar can be used as bedding or as part of a manure management system to reduce odors, retain nutrients and improve the carbon content in the manure.

Stormwater management is likely to be a large market for biochar as cities and residents look for ways to increase infiltration of water while reducing toxins. Research at the University of Delaware concluded that biochar could effectively compete with many of the current best management practices in stormwater management.

These and other evolving markets take time to develop at a local and regional level. One challenge for those making biochar as a byproduct of biomass energy production is that these are new products and new markets that are not well understood. To alleviate this challenge, some biochar technology vendors are offering to buy all biochar produced, as they are interested in waste mitigation as well as biochar marketing.

Author: Kathleen Draper  
U.S. Director, Ithaka Institute for Carbon Intelligence  
Kdraper2@rochester.rr.com  
[www.biochar-journal.org](http://www.biochar-journal.org)





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

In reply, please refer to:  
File:

September 6, 2019

S0905KK

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813  
via email only: [eis@pvtland.com](mailto:eis@pvtland.com)

Mr. Franz Kraintz  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> floor  
Honolulu, Hawaii 96813  
via email only: [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Dear Messrs. Bromwell and Kraintz:

SUBJECT: Comments on Environmental Impact Statement Preparation Notice  
PVT Integrated Solid Waste Management Facility

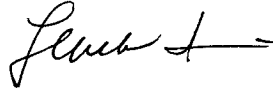
The Department of Health, Solid and Hazardous Waste Branch, Solid Waste Section (SWS) has reviewed the Environmental Impact Statement for the subject facility and has the following comments:

1. Regarding the gasification unit, the SWS considers the feedstock a solid waste and intends to regulate it as such. This issue can be further discussed during the solid waste permitting process as necessary.
2. The document states that feedstock is suitable for bioconversion. This process and potential products have not yet been evaluated by the SWS. We look forward to receiving your solid waste application describing this activity.
3. All other concerns will be addressed upon receipt of the PVT solid waste permit application, including the design and sizing of the landfill liner and leachate collection and management systems. It is also noted that the proposed landfill is located inland of the underground injection control line.

Mr. Karl Bromwell  
Mr. Franz Kraitz  
September 6, 2019  
Page 2

If you have any questions regarding this letter, please contact Mr. Kevin Kihara of our Solid Waste Section at (808) 586-4226.

Sincerely,

A handwritten signature in black ink, appearing to read "Lene Ichinotsubo", with a horizontal line extending to the right.

LENE ICHINOTSUBO, P.E., ACTING CHIEF  
Solid and Hazardous Waste Branch

January 10, 2020

Mr. Russell Y. Tsuji, Land Administrator  
State of Hawaii  
Department of Land and Natural Resources  
Land Division  
Post Office Box 621  
Honolulu, Hawaii 96809

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Tsuji:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. **Engineering Division:** EIS Section 3.3.2.2., *Flooding* discusses flood zones. The applicable FHAT reports for the existing PVT ISWMF classifies the site as "Zone X", an area which has been determined to be outside the 0.2% annual chance floodplain (the 500-year floodplain). The applicable FHAT reports for the Project Site classifies the site as "Zone D", an area in which flood hazards have not been determined. The Project Site, while not assessed, sits at an elevation higher than the adjacent PVT ISWMF, therefore it would be located in an area with less risk of flood. The Proposed Action will comply with applicable NFIP and City and County of Honolulu regulations.
2. **Division of Forestry and Wildlife:** We acknowledge that the Division of Forestry and Wildlife has no comments on the Draft EIS.
3. **Commission on Water Resource Management:**
  - a. PVT coordinated with the Engineering Division of the State Department of Land and Natural Resources as part of the EIS process. The Proposed Action is not a State Water Project.
  - b. As described in the EIS Section 4.3, *Water and Wastewater*, the Proposed Action is not anticipated to increase demand on the area's freshwater sources. PVT will use reverse osmosis technology to generate potable water on-site from non-potable, brackish well water. When practical, PVT will install water efficient fixtures and implement water efficient practices to reduce overall water demand.
  - c. EIS Section 2.5.3.3, *Stormwater Management (Site-wide)* describes best management practices (BMP) for stormwater management to minimize the impact of the Proposed Action to the area's hydrology while maintaining on-site infiltration and preventing

polluted runoff from storm events.

- d. PVT will use reverse osmosis technology to generate potable water on-site from non-potable, brackish well water. This alternative water source will be used for landscape irrigation, office trailers, daily washout of the water trucks, operation of the water sprayer used for dust control, and process water for the gasification unit or anaerobic digestion system.
- e. PVT will explore participation in the Hawaii Green Business Program.
- f. PVT will install permanent landscape irrigation as described in its *Landscaping Plan* (Final EIS, Appendix I). PVT will produce water suitable for irrigation from brackish well water using reverse osmosis. PVT will consider conservation best management practices endorsed by the Landscape Industry Council of Hawaii.
- g. The Proposed Action is not anticipated to degrade or contaminate ground or surface water (EIS Section 3.4, *Water Resources*). PVT will coordinate with the State Department of Health on issues related to water quality, as necessary.
- h. PVT has the necessary Well Construction Permits.
- i. PVT has the necessary Pump Installation Permits.
- j. The Final EIS Section 2.5.6.2, *Water Facilities* describes the source of and demand for non-potable and potable water with the Proposed Action.

The following edits were made to the Final EIS to address this comment (text changes underlined in red):

#### Section 2.5.6.2, *Water Facilities*

Potable water for the Proposed Action would be generated on site from non-potable water using reverse osmosis or provided by the Board of Water Supply (BWS) municipal system. Potable water use for the proposed operation includes: landscape irrigation, office trailers, daily washout of the water trucks, operation of the water sprayer used for dust control, and process water for the gasification unit or anaerobic digestion system. Bottled water would be used for drinking.

Potable water use for the Proposed Action would be minimal, similar to that of PVT ISWMF, which uses approximately 65,000 gallons per day. There would be little, if any, net increase in potable water use as operations transition from the PVT ISWMF to the Project Site. Inactive portions of the landfill would be vegetated to reduce the need for dust suppression, but the groundcover is drought tolerant and would not require irrigation.

Non-potable water would be withdrawn from two existing wells on the Project Site PW-1 (Well 2308-03) and North Well (Well 2408-11) (Figure 2-9). PW-1 is located in a basal, unconfined dike aquifer (Aquifer Code 30302112). The

aquifer is classified as not ecologically important and replaceable (Mink and Lau, 1990). PVT's North Well is in the upper, basal, unconfined, sedimentary caprock aquifer (Aquifer Code 30302116). The aquifer is classified as not ecologically important and irreplaceable (Mink and Lau, 1990). Both aquifers have moderate salinity with chloride concentrations between 1,000 and 5,000 mg/l and are not a source for drinking water. The brackish water would be pumped into the two existing and two planned aboveground tanks located near the wells (Figure 2-9). Non-potable water would be used as the primary method of dust control.

Water usage from the wells is permitted up to a maximum of 288,000 gallons per day (gpd) per well, and usage is documented with meters installed on the output of the wells (Department of Land and Natural Resources [DLNR] Well No: 2308-03 and Well No: 2408-11). The aquifers' sustainable yields and pumpage were considered in issuing the permits. PVT does not propose to increase the permitted usage. Current water usage is approximately 100,000 GPD.

Operational controls to minimize water use would include vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (i.e., portions of the materials recovery areas).

When there is no future use for the wells at the PVT ISWMF and Project Site, the wells will be properly abandoned and sealed. Permits from the Commission will be obtained prior to any sealing work.

2. **Land Division—Oahu District:** We acknowledge that the Land Division has no comments on the Draft EIS.
3. **Division of Aquatic Resources:** The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).

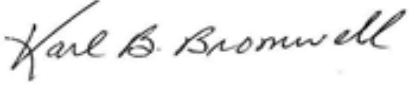
In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that future extreme storm events and the sea level rise associated with climate change will be properly managed with no impact to the environment.

The existing PVT ISWMF stormwater management system was designed with conservative assumptions and constructed in accordance with the above referenced solid waste regulations. This system has performed well during extreme storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

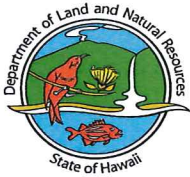
Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive style with a large, stylized 'K' and 'B'.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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

September 04, 2019

LD 1294

Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu HI 96813

*Via email: eis@pvtland.com*

Dear Sirs:

**SUBJECT: Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation, Waianae, Island of Oahu; TMK: (1) 8-7-009:007**

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

Enclosed are comments from DLNR's a) Division of Aquatic Resources, b) Engineering Division, c) Division of Forestry and Wildlife, d) Commission on Water Resource Management, and e) Land Division—Oahu District. Should you have any questions, please feel free to contact Barbara Lee, Project Development Specialist, by phone at (808) 587-0453 or via email at [barbara.j.lee@hawaii.gov](mailto:barbara.j.lee@hawaii.gov). Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji", is written over a horizontal line.

Russell Y. Tsuji  
Land Administrator

Enclosure(s)

cc: Central Files

Franz Krintz, Department of Planning & Permitting *Via email: fkrantz@honolulu.gov*





87-2020 Farrington Highway ■ Waianae, Hawaii 96792 ■ Tel: 808 668-4561 ■ FAX: 808 668-1368 ■ Website: [www.pvtland.com](http://www.pvtland.com)

LD 1294  
RECEIVED  
LAND DIVISION

2019 JUL 22 AM 10:57

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

July 19, 2019

Aloha:

PVT Land Company, LTD (PVT) prepared a Draft Environmental Impact Statement (EIS), pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

TITLE OF PROJECT: PVT Integrated Solid Waste Management Facility Relocation

LOCATION: ISLAND Oahu DISTRICT Waianae

TAX MAP KEY NUMBER: (1) 8-7-009:007

AGENCY ACTION: \_\_\_\_\_ APPLICANT ACTION: X

PROJECT SUMMARY: Attached

**REVIEW THE DEIS ONLINE AT:** [http://oegc2.doh.hawaii.gov/EA\\_EIS\\_Library/2019-07-23-OA-DEIS-PVT-ISWMF-Relocation.pdf](http://oegc2.doh.hawaii.gov/EA_EIS_Library/2019-07-23-OA-DEIS-PVT-ISWMF-Relocation.pdf), or [www.pvtland.com](http://www.pvtland.com).

Note that the link will not be active until the date of publication on July 23.

**YOUR COMMENTS MUST BE RECEIVED OR POSTMARKED BY: September 6, 2019.**  
(45-day comment period)

**PLEASE SEND ORIGINAL COMMENTS TO THE:**

CONSULTANT: Hart Crowser, Inc.  
ADDRESS: 7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Karl Bromwell / (808) 587-7747  
EMAIL: [eis@pvtland.com](mailto:eis@pvtland.com)

**COPIES OF THE COMMENTS SHOULD BE SENT TO THE FOLLOWING:**

ACCEPTING  
AUTHORITY: Department of Planning and Permitting  
ADDRESS: 650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
CONTACT/PHONE: Franz Krintz, AICP / (808) 768-8046  
EMAIL: [fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

DEPARTMENT OF PLANNING AND PERMITTING  
SUMMARY PROJECT DESCRIPTION

APPLICANT/LANDOWNER :	PVT Land Company, Ltd. (PVT)/Leeward Land Company, Ltd., and affiliate of PVT.
AGENT :	Hart Crowser, Inc.
APPLICANT'S PROPOSAL & BASIS FOR REQUEST :	<p>The purpose of the proposed action is for PVT to provide uninterrupted construction and demolition (C&amp;D) waste management for Oahu by relocating their existing operations to an adjacent location. The existing PVT C&amp;D waste management facility is the only commercial facility available for public use on Oahu and is beginning closure per its approved Closure Plan. The proposed project will satisfy Oahu's continued need for a C&amp;D landfill and recycling facility as well as disaster debris processing.</p> <p>PVT proposes to (1) relocate its C&amp;D debris receiving, recycling, and disposal operation to a parcel on the opposite side of Lualualei Naval Road from its current location, (2) upgrade its recycling operations by installing two materials recovery and processing lines, and (3) install renewable energy facilities (gasification unit or anaerobic digestion unit and photovoltaic panels) to power its operations.</p>
LOCATION :	The project site is on the east side of Lualualei Naval Road, opposite the existing PVT C&D waste management facility.
TAX MAP KEYS (TMK) :	8-7-009: 007
LAND AREA :	179.109 undeveloped acres.
STATE LAND USE DISTRICT:	Agricultural District.
SUSTAINABLE COMMUNITIES PLAN AREA :	Waianae.
SUSTAINABLE COMMUNITIES: PLAN LAND USE MAP :	Agriculture.
EXISTING ZONING :	AG-2 General Agricultural District.
SPECIAL DISTRICT :	The project site is not within a Special District.



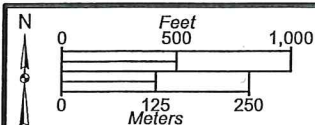
Document Path: F:\Hawaii\GIS\Projects\PVT\Figure1-1\_ProjectSite\_revGMS.mxd  
Date Saved: 10/12/2018 4:02:03 PM







Date Saved: 6/20/2019 1:59:05 PM Document Path: C:\Users\mathew\Documents\ArcGIS\Projects\Figure2-2 Existing Conditions 190415 A0426500-D3DE-46DC-BF17-4C6F5FCEAE41\06\Figure2-2 Existing Conditions edit.mxd

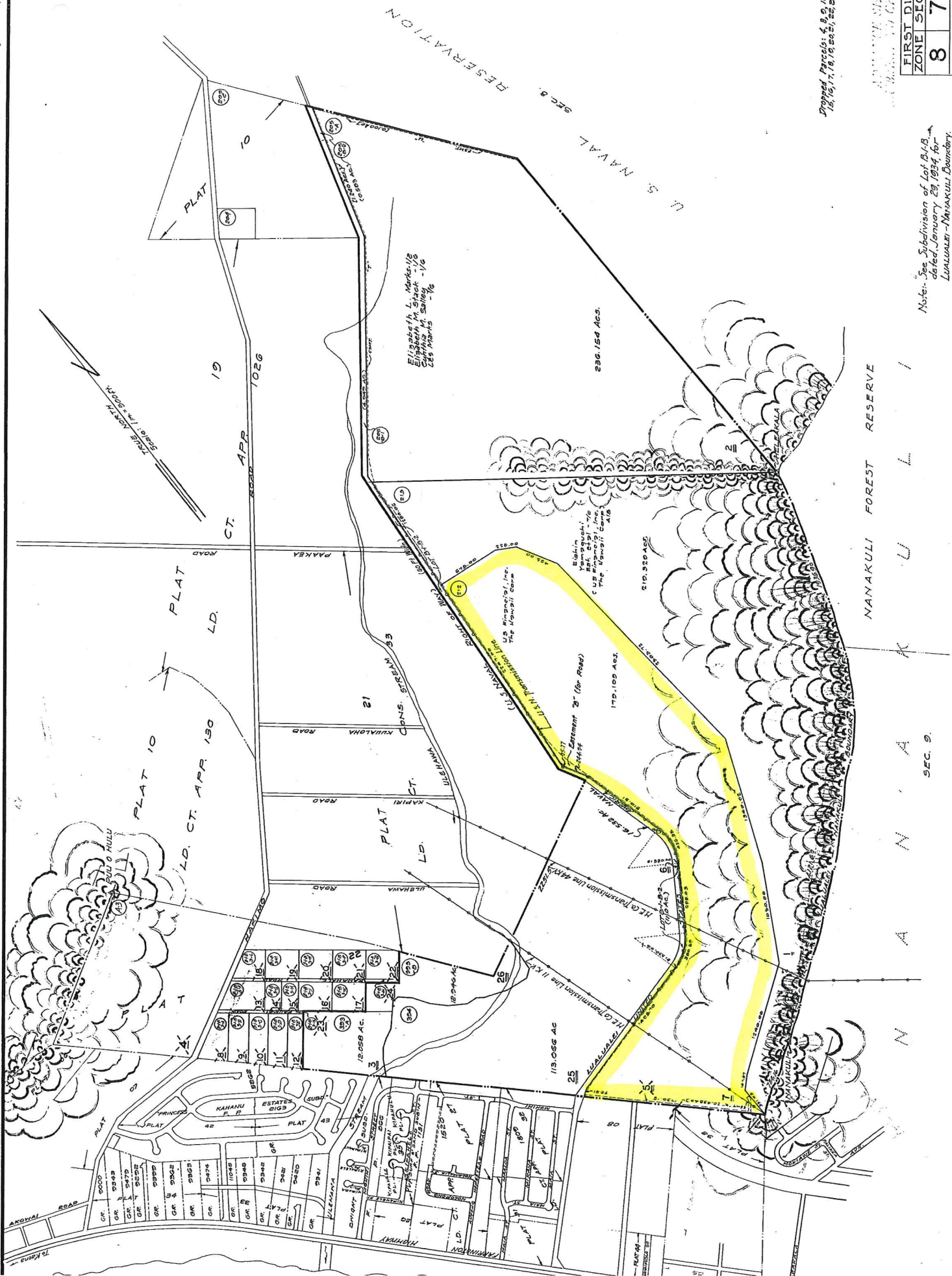


**Existing Conditions**  
PVT ISWMF Relocation  
Nanakuli, Waianae District, Oahu, Hawaii

Figure  
**2-2**

Source: A-Mehr 2018, Aerial photograph provided by Hexagon Imagery Program Data.





Dropped Parcels: 4, 8, 9, 10, 11, 12, 13, 14,  
15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 5, .

LETTER NO. 107

FIRST DIVISION	CONTAINING	PARCELS
ZONE SEC. PLAT		
8 7 09		

Scale: 1 in. = 500 ft.

**PRINTED**

Note:- See Subdivision of Lot B.1.B. dated, January 29, 1934, for LUALUALEI - NAIKAKULI Boundary.

LUALUALAEI, WAIANAE. (LD. CT. APP. 130.)

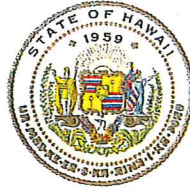
DAVID Y. IGE  
GOVERNOR OF HAWAII



RECEIVED  
LAND DIVISION

JUL 31 AM 10:49

DEPT. OF LAND AND NATURAL RESOURCES  
STATE OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

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

July 23, 2019

LD 1294

MEMORANDUM

TO:

**DLNR Agencies:**

X 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 – Oahu District

X Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

**Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation**

LOCATION:

Waianae, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT:

**PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT affiliate)**

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

Signed:

Print Name:

Carty S. Chang, Chief Engineer

Date:

7/31/19

Attachments

Cc: Central Files

19 JUL 25 AM 10:39 ENGINEERING



**DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION**

**LD/Russell Y. Tsuji**

**Ref: Draft Environmental Impact Statement (EIS) for PVT Integrated Solid  
Waste Management Facility Relocation**

**TMK(s): (1) 8-7-009:007**

**Location: Waianae, Island of Oahu**

**Applicant: PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT  
affiliate)**

**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.hawaiiinfip.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) 241-4846.

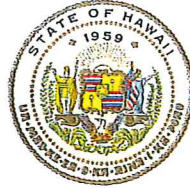
Signed: \_\_\_\_\_

CARTY S. CHANG, CHIEF ENGINEER

Date: \_\_\_\_\_



DAVID Y. IGE  
GOVERNOR OF HAWAII



2040  
SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

LD 1367

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

July 23, 2019

LD 1294

MEMORANDUM

TO:  
FROM

**DLNR Agencies:**

- ☒ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☐ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

TO:  
FROM:  
SUBJECT:

Russell Y. Tsuji, Land Administrator

**Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation**

LOCATION: Waianae, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT: **PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT affiliate)**

Transmitted for your review and comment is information on the above-referenced project. The **Draft EIS** has been published in OEQC's official publication, The Environmental Notice (TEN), on July 23, 2019. This issue of the TEN and a link to the **Draft EIS** can be found at: [http://oeqc2.doh.hawaii.gov/The\\_Environmental\\_Notice/2019-07-23-TEN.pdf](http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-07-23-TEN.pdf)

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- ☒ We have no objections.
- ☒ We have no comments.
- ☐ Comments are attached.

Signed: \_\_\_\_\_

**DAVID G. SMITH, Administrator**

Attachments  
Cc: Central Files

Print Name:  
Date:

7/26/19

DAVID Y. IGE  
GOVERNOR OF HAWAII



RECEIVED  
LAND DIVISION

2019 AUG 22 AM 10:43

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII



LD 1540

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

July 23, 2019

LD 1294

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☐ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

FR:

TD:

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

**Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation**

LOCATION:

Waianae, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT:

**PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT affiliate)**

RECEIVED  
COMMISSION ON WATER  
RESOURCE MANAGEMENT  
2019 JUL 25 PM 2:41

Transmitted for your review and comment is information on the above-referenced project. The **Draft EIS** has been published in OEQC's official publication, The Environmental Notice (TEN), on July 23, 2019. This issue of the TEN and a link to the **Draft EIS** can be found at: [http://oeqc2.doh.hawaii.gov/The\\_Environmental\\_Notice/2019-07-23-TEN.pdf](http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2019-07-23-TEN.pdf)

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

Signed: /s/ M. Kaleo Manuel

Attachments

Cc: Central Files

Print Name: Deputy Director

Date: August 21, 2019

FILE ID: RFD 5026.3  
DOC ID: 217471



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

SUZANNE D. CASE  
CHAIRPERSON


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

M. KALEO MANUEL  
DEPUTY DIRECTOR

August 21, 2019

REF: RFD.5026.3

TO: Mr. Russell Tsuji, Administrator  
Land Division

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

SUBJECT: Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation

FILE NO.: RFD.5026.3  
TMK NO.: (1) 8-7-009:007

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.

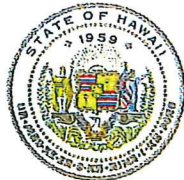
- ☐ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- ☒ 2. We recommend coordination with the Engineering Division of 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 EPA 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](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: Section 2.5.6.2 states that potable water use, approximately 65,000 gpd, will be generated onsite from non-potable water or provided by the BWS. If generated onsite, the report should disclose the specific aquifer system area in which the existing non-potable wells are located, its sustainable yield, current pumpage, and potential impacts related to the withdrawal of both potable and non-potable quantities on the aquifer system area's available sustainable yield as well as on any public trust uses of water. The State Well Nos. for the existing wells should be identified. In addition, it is not clear what are the non-potable water source(s) for the existing facility slated for closure – if supplied by onsite wells, and no future use of these wells are anticipated, the wells should be properly abandoned and sealed. Permits from the Commission are required prior to any sealing work.

If you have any questions, please contact Lenore Ohye of the Planning Branch at 587-0216 or W. Roy Hardy of the Regulation Branch at 587-0225.



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

July 23, 2019

LD 1294

MEMORANDUM

TO: **DLNR Agencies:**  
X 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 – Oahu District  
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: **Draft Environmental Impact Statement (EIS) for PVT Integrated Solid Waste Management Facility Relocation**

LOCATION: Waianae, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT: **PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT affiliate)**

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- ( ) We have no objections.  
( X ) We have no comments.  
( ) Comments are attached.

Signed:

A handwritten signature in black ink, appearing to read "Patti E. Miyashiro", is written over a horizontal line.

Attachments  
Cc: Central Files

Print Name: Patti E. Miyashiro  
Date: July 25, 2019

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

July 23, 2019

MEMORANDUM

TO:

**DLNR Agencies:**

☒ **Div. of Aquatic Resources**

☐ Div. of Boating & Ocean Recreation

☒ Engineering Division

☒ Div. of Forestry & Wildlife

☐ Div. of State Parks

☒ Commission on Water Resource Management

☐ Office of Conservation & Coastal Lands

☒ Land Division – Oahu District

☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

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LOCATION:

Waianae, Island of Oahu; TMK: (1) 8-7-009:007

APPLICANT:

**PVT Land Company, Ltd./Leeward Land Company, Ltd. (PVT affiliate)**

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

Signed:

Attachments

Cc: Central Files

Print Name:

Brian J Neilson DAR Administrator

Date:

8/30/19

RECEIVED

JUL 25 2019

Division of Aquatic Resources

DAR 5980

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

20 SEP -4 AM 10:59

LD 1294

RECEIVED  
LAND DIVISION

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF AQUATIC RESOURCES  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

Date: 08/29/19

DAR #5980

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

ROBERT K. MASUDA  
FIRST DEPUTY

M. KALEO MANUEL  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

MEMORANDUM

TO: Brian J. Neilson  
DAR Administrator

FROM: Ryan Okano, PhD <sup>RO</sup>, Aquatic Biologist

SUBJECT: Draft Environmental Impact Statement for PVT Integrated Solid Waste Management  
Facility Relocation

Request Submitted by: Russell Y. Tsuji, Land Administrator

Waianae, Oahu; TMK: (1)8-7-009:007

Location of Project:

Brief Description of Project:

PVT owns and operates the only publicly-available, commercial construction and demolition (C&D) debris management facility on O'ahu. Its facility is part of the City and County of Honolulu's solid waste management plan and provides a critical service to the construction industry and the City's disaster response efforts. PVT's materials recovery facility reuses or recycles 80% of the C&D debris received. While this has extended the life of the landfill, the construction boom on O'ahu has generated more C&D debris than anticipated. PVT is initiating landfill closure activities in accordance with its permits.

Comments:

☐ No Comments ☒ Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved:

Brian J. Neilson  
DAR Administrator

Date:

8/30/19



DAR# 5980

Brief Description of Project

The PVT facility closure would leave Oahu without a C&D landfill and materials recovery facility. PVT proposes to (1) relocate its C&D debris receiving, recycling, and disposal operation to a parcel, owned by a PVT-affiliate, on the opposite side of Lualualei Naval Road from its current location, (2) upgrade its recycling operations by installing two materials recovery and processing lines, and (3) install renewable energy facilities (a gasification unit or anaerobic digestion system and photovoltaic panels) to power its operations. The relocation will allow uninterrupted C&D debris management, focusing on the diversion of 80% of construction debris from the landfill through reuse and recycling.

DAR# 5980

Comments

The Division of Aquatic Resources (DAR) does have concerns pertaining to the proposed PVT Integrated Solid Waste Management Facility Relocation project. DAR is primary concerned about potential impacts that erosion, sedimentation, and runoff may have on water quality, and thus aquatic resources. This concern is elevated due to the slope of the land at the site of the proposed project. Although the proposed project site is not adjacent to any major water body, Ulehawa Stream is less than a quarter mile away from the proposed project site, and the Pacific Ocean is about half a mile away from the proposed project site. Both water bodies are inhabited by native aquatic resources species. During intense storm events runoff from your proposed project site may reach these water bodies and have an adverse impact on aquatic resources.

DAR appreciates your narrative and figures describing the storm water management system. Although you may be only required to design the storm water management system to manage a 25-year, 24-hour storm, DAR urges you to consider designing the storm water management system to manage more extreme storm events. Some believe that due to climate change storm frequency and intensity will increase. Upgrading your design would be a move towards making your facility more resilient to climate change and be an over all investment in to you operation.

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---

January 10, 2020

Mr. Jade T. Butay  
Director of Transportation  
State of Hawaii - Department of Transportation  
869 Punchbowl Street  
Honolulu, HI 96813-5097

RE: PVT Integrated Solid Waste Management Facility Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Jade T. Butay:

Thank you for your letter regarding the PVT Integrated Solid Waste Management Facility Relocation Draft EIS.

We understand your comments included that the TIAR is acceptable, and the proposed relocation of the PVT waste management facility is not anticipated to have a significant impact to our State highway facilities.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

JADE T. BUTAY  
DIRECTOR

Deputy Director  
LYNN A.S. ARAKI-REGAN  
DEREK J. CHOW  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN

IN REPLY REFER TO:  
DIR 0733  
HWY-PS 2.1621

November 19, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Draft Environmental Impact Statement  
PVT Integrated Solid Waste Management Facility Relocation  
Oahu, Waianae, TMK: (1) 8-7-009:007

The applicant, PVT Land Company, Ltd. (PVT), proposes to relocate their existing waste management facilities to an adjacent location along Lualualei Naval Access Road. This would allow them to continue to provide waste management services to the Island of Oahu. PVT plans to move its construction and demolition recycling and disposal operations, upgrade its recycling operations, and install renewable energy facilities for its operations. The facility has access to Lualualei Naval Access Road, a roadway under the jurisdiction of the U.S. Navy, and connects to Farrington Highway, State Route 93, at a signalized intersection.

The Environmental Impact Statement was prepared in compliance with Hawaii Revised Statutes 343 due to the proposed action including a landfill. A Traffic Impact Analysis Report (TIAR), by the Traffic Management Consultant, dated June 18, 2019 was Appendix F.

The Hawaii Department of Transportation (HDOT) has the following comments:

1. The TIAR is acceptable.
2. The proposed relocation of the PVT waste management facility is not anticipated to have a significant impact to our State highway facilities.

Mr. Karl Bromwell  
November 19, 2019  
Page 2

HWY-PS 2.1621

If there are questions, please contact Jeyan Thirugnanam, Systems Planning Engineer, Highways Division, Planning Branch at (808) 587-6336 or by email at [jeyan.thirugnanam@hawaii.gov](mailto:jeyan.thirugnanam@hawaii.gov).  
Pleaser reference file review number PS 2019-008.

Sincerely,

A handwritten signature in black ink, appearing to read "Jade T. Butay". The signature is stylized with a large initial "J" and a long, sweeping underline.

JADE T. BUTAY  
Director of Transportation

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January 10, 2020

Sylvia Hussey, Ed.D  
Ka Pouhana Kuikawa, Interim Chief Executive Officer  
State of Hawaii  
Office of Hawaiian Affairs  
560 N. Nimitz Hwy., Suite 200  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Sylvia Hussey:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. The EIS includes an alternatives analysis in accordance with HAR 11-200-17(f). The EIS considered alternatives and their environmental benefits, costs, and risks.

Alternatives considered in the EIS include alternative designs and technology, postponing the Proposed Action, and alternative locations. The EIS retained and evaluated the environmental benefits, costs and risks of the Proposed Action and No Action Alternative. Under the No Action Alternative, the City and County of Honolulu's (CCH) Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the CCH as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Based on your comment, we've attached the two City and County of Honolulu siting studies to

the Final EIS as Appendix L.

PVT will continue to work with the Nanakuli community to address their concerns.

2. EIS Section 5.1, *Archaeological and Historical Resources* summarizes the findings of the *Archaeological Literature Review and Field Inspection* (Appendix G) prepared by Cultural Surveys Hawaii (CSH). *The Archaeological Literature Review and Field Inspection Report* satisfies the requirement for consultation/documentation to determine appropriate further archaeological study and mitigation (if any).

CSH's conclusions and recommendations considered not only the 2006 Archaeological Inventory Survey, but 23 archaeological studies previously completed in the vicinity of the Project Site; four of these studies included the Project Site.

The archaeological investigations in Lualualei Valley are consistent with the accounts of settlement history. The studies demonstrate a pattern of high-intensity land use in the upper Lualualei Valley and along the coast with a relative gap of archaeological features in the intervening areas (where the Project Site is located). The lack of traditional Hawaiian features discovered in these areas may be due to modern ground disturbance activities (e.g., bulldozing, farming, ranching) that destroyed the features; however, it is more likely that relative to the inland and ocean areas, the central areas lacked sufficient resources and were used intermittently in transit between the ocean and upper valley (CSH 2018).

In 2018, CSH archaeologists conducted a field investigation to re-identify the three known historic sites and assess their condition relative to previous observations. The three-site appeared undisturbed. A determination of "no historic properties affected" by the Proposed Action is recommended by CSH, as per HAR § 13-284-7. This determination has been provided to SHPD as part of the EIS process.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



**STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS**  
560 N. NIMITZ HWY., SUITE 200  
HONOLULU, HAWAII 96817

HRD19-8764C

September 4, 2019

Karl Bromwell  
Principal Environmental Scientist  
Hart Crowser, Inc.  
7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813

Re: Draft Environmental Impact Statement  
PVT Integrated Solid Waste Management Facility Relocation  
Lualualei Ahupua'a, Wai'anae Moku, O'ahu Moku  
Tax Map Key: (1) 8-7-009: 007

Aloha e Mr. Bromwell:

The Office of Hawaiian Affairs (OHA) is in receipt of your July 19, 2019 letter inviting us to comment on the Draft Environmental Impact Statement (DEIS) for the PVT Integrated Solid Waste Management Facility Relocation project in Lualualei, O'ahu. Hart Crowser and Pryzm Consulting have been contracted by the project proponent, PVT Land Company Limited (PVT), to complete this DEIS in accordance with Hawai'i Revised Statutes (HRS) Chapter 343. The existing PVT construction and demolition (C&D) waste facility, located on an adjacent 200-acre land parcel off Lualualei Naval Road near Nānākuli, is reaching capacity faster than anticipated and thus seeks to relocate current operations to the 179-acre subject land parcel. The existing C&D facility will cease operations per a closure plan and PVT will conduct post-closure care. OHA offers the following comments regarding alternative locations considered and compliance with Hawai'i Revised Statutes 6E, historic preservation.

**Alternative Locations Considered**

OHA previously commented on the Environmental Impact Statement Preparation Notice (EISPN) for this project in February 2019, recommending that alternatives to the proposed site location be considered as required by Hawai'i Administrative Rules (HAR) 11-200-17(f). Although the EISPN did not mention an alternative site analysis, the current DEIS evaluated 11 alternative landfill site locations previously identified by the City & County of Honolulu (CCH) for availability and sustainability in Section 2.7.1.3 of the DEIS. Per the CCH's landfill siting report, an "Upland

Nanakuli Site B” [TMK (1)8-5-006:004] in Wai‘anae Valley was ranked highest in 2017.<sup>1</sup> However, the site was not retained in the DEIS for further consideration due to “engineering and site development constraints”. Table 2-7 of the DEIS details that the Upland Nanakuli Site B location would require extensive roadway improvements and that the site is underlaid by fresh water. In fact, none of the proposed CCH sites were considered for retainment in the EIS.

As mentioned in our February 2019 letter, OHA again reiterates that HAR 11-200-17(f) requires that alternatives be considered regardless of cost. As was portrayed in the EISPN, the information presented in the DEIS leads readers to believe that the only feasible alternative is the proposed action as all alternative site locations were dismissed without any comparative analysis. The proposed action thus appears forced onto the CCH as the DEIS leads readers to believe there are currently no other viable options. Per HAR 11-200-17(f), the alternatives considered must comparatively evaluate environmental benefits, costs, and risks of the proposed action and each reasonable alternative. OHA argues that this is not adequately demonstrated.

Furthermore, OHA notes that many in the neighboring Nānākuli community still object to the current expansion as their community has endured the impacts (i.e., dust, traffic, obstructed viewplanes) of landfill activities for many years. Further consultation with the Nānākuli community to discuss the alternative site analysis and on-going community concerns is thus recommended. In fairness to this community, every effort should be made to meaningfully assess alternatives.

## **HRS 6E, Historic Preservation, Compliance**

Section 5.1 of the DEIS, titled Archaeological and Historical Resources, details that an archaeological literature review and field inspection report was completed for this project in 2018 by Cultural Surveys Hawai‘i, Inc. (CSH). The work included research into existing historical and archaeological studies, as well as limited (.5 person days) pedestrian inspection fieldwork. The fieldwork was successful in relocating three historic properties (a World War II bunker, pre-Contact rock shelter, and rock mound) identified during previous archaeological survey work done in 2006 and 2007. A preservation plan is currently in place for the pre-Contact rock shelter, State Inventory of Historic Places site #50-80-08-6699. As these sites are outside of the proposed site development area, CSH concluded that no historic properties would be affected. OHA notes that there is no mention of whether or not the State Historic Preservation Division (SHPD) was contacted to comment on the current level of archaeological work or whether the proposed work is satisfactory for HRS 6E compliance.

OHA notes that only a single archaeological inventory survey (AIS) with very limited subsurface testing was completed in 2006 when the subject parcel was being considered for a “Dirty Materials Recovery Facility”. Of the 200 acres surveyed, only two targeted excavation units were dug at SIHP #50-80-08-6699. Both units found evidence of cultural materials in subsurface layers that dated to pre-Contact times. Considering the age of the AIS and the limited subsurface testing which included the discovery of subsurface cultural materials, OHA feels that SHPD should be allowed to comment on the current project and provide guidance on whether or not the AIS needs to

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<sup>1</sup> November 2017. Department of Environmental Services, City and County of Honolulu. *Assessment of Municipal Solid Waste Handling Requirements for the Island of O‘ahu*. Prepared by RM Towill Corporation and SMS Research Services.

be updated. OHA notes that depending on certain situations, SHPD has required AIS updates or additional testing in cases where AIS work is not current. Although Volume II of the DEIS provides prior SHPD comment letters pertaining to the 2006 work, the current project is not the same and should thus undergo its own HRS 6E review.

OHA looks forward to reviewing a revised DEIS that addresses our concerns regarding alternative locations, SHPD consultation, and HRS 6E compliance. If needed, OHA is willing to engage in any future consultations. Should you have any questions, please contact our Lead Compliance Specialist, Kamakana C. Ferreira, at (808) 594-0227, or by email at [kamakanaf@oha.org](mailto:kamakanaf@oha.org).

‘O wau iho nō me ka ‘oia ‘i‘o,



Sylvia Hussey, Ed.D.

Ka Pouhana Kūikawā, Interim Chief Executive Office

SH:kf

CC: Franz Krintz, Department of Planning and Permitting

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January 10, 2020

Mary Alice Evans  
Director  
State of Hawaii Office of Planning  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawaii 96804

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mary Alice Evans:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. Thank you for acknowledging that your February 13, 2019 letter and response were included in the Draft EIS.
2. The Final EIS Section 6.2.2.6, *Criterion 6. The Project Site Is Unsuitable For The Permissible Uses* and 6.2.2.7, *Agricultural Productivity Ratings* discuss current and past agricultural uses on the Project Site. The Project Site is not used for agriculture and no historical agricultural production was identified.

The following edits were made to the Final EIS to address this comment (text changes underlined in red):

*Section 6.2.2.7, Agricultural Productivity Ratings, Important Agricultural Land*

1. Land currently used for agriculture (farming, grazing, ranching). The sources of data for this criterion included aerial imagery, state geographic information system data, and CCH real property taxation data (identifies agricultural exemptions [CSH 2019b]). The Project Site did not meet this criterion. As described in other sections of this ~~Draft~~ Final EIS, the Project Site is not used for agriculture and no historical agricultural production was identified (Section 5.1, *Archaeological and Historical Resources*; Section 5.2, *Cultural Resources*; and Section 5.3, *Socioeconomic Resources and Land Use Characteristics*).

Section 5.1, *Archaeological and Historical Resources* and Section 5.2, *Cultural Resources* describe historic land uses on the Project Site. There was no evidence of historic subsistence gathering of plant and aquatic resources or other agricultural production at the Project Site. In summary:

- Historic settlement patterns were heavily influenced by water resources. Land use in Lualualei was greatest near the coastal areas where marine resources were plentiful, and in the mountainous interior where there was sufficient rainfall. The intervening lands, including the Project Site, were dry scrubland and it is unlikely it would have been frequently utilized by Native Hawaiians. Archaeological evidence supports this assumption. Two pre-contract historic properties were identified at the Project Site, a stacked stone mound interpreted as a traditional Hawaiian marker and basalt rock shelter. Artifacts found within the rock shelter site suggest it was used as a temporary habitation on an infrequent basis. Native Hawaiians likely took refuge from the mid-day heat or sought shelter while traveling between the deep valley and the coastline.
- Journal entries from early European explorers, census data, and Mahele records have aided in the reconstruction of the agricultural landscape during the time of Western Contact. The coastal lowlands of Lualualei and Waianae Moku would have been cultivated with ‘uala and niu, while valley areas would have been planted in kalo and wauke. CSH did not identify evidence of subsistence farming or gathering within the Project Site.
- The Republic of Hawaii opened lands for homesteading in 1895. By the early 1920s, about 40 families had settled on homestead lots in Lualualei (CSH 2018). No homesteads were awarded at the Project Site.
- By the early twentieth century, parcels within Lualualei Valley were used to grow sugar and pineapple and as grazing land. Historic maps from 1906, 1919, 1936, 1943, 1954, 1963, 1965, 1969, 1977, and 1993 show that the Project Site was largely vacant and was not used for the cultivation of crops or ranching (Appendix H).

Section 6.2.2.7, *Agricultural Productivity Ratings, Agricultural Lands of Importance in the State of Hawaii*

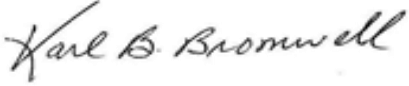
No “Unique” lands were designated at or in the vicinity of the Project Site. “Prime” lands were designated in the northwest corner of the Project Site (1.17 acres) and “Other” lands were identified in the southwest corner of the Project Site (34.68 acres) (Table 6-2 and Figure 6-1). The USDA soil classification data discussed below in *Land Capability Groupings by USDA*, was relied upon in the ALISH study. The areas of inaccurate USDA soil classification data found in the IAL determination coincide with the inaccurate ALISH Prime and Other designated areas at the Project Site. As described in Section 3.2, *Topography, Geology, and Soils* and Appendix A, the subsurface investigations at the Project Site determined there are no ALISH at the Project Site.

3. The archeological and cultural assessments have been provided to SHPD as part of the EIS process. With regard to the Kapaakai decision, Section 5.2, *Cultural Resources* of the EIS and the *Cultural Impact Assessment* (Appendix H) document that no traditional and Native Hawaiian cultural practices exercised on the Project Site.

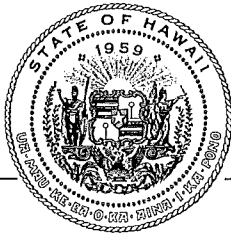
We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



## OFFICE OF PLANNING STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846  
Fax: (808) 587-2824  
Web: <http://planning.hawaii.gov/>

DAVID Y. IGE  
GOVERNOR  
  
MARY ALICE EVANS  
DIRECTOR  
OFFICE OF PLANNING

DTS201909101710NA

September 11, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd., Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Draft Environmental Impact Statement– PVT Integrated Solid Waste  
Management Facility Relocation, Nanakuli, Waianae District, Oahu  
TMK: (1) 8-7-009: 007

Thank you for the opportunity to provide comments on this Draft Environmental Impact Statement (DEIS) for the relocation of the PVT Land Company (PVT) integrated solid waste management facility.

The DEIS indicates that the PVT Land Company proposes to relocate its existing commercial construction and demolition (C&D) debris management facility which includes solid waste recovery, disposal and recycling operations to a 179-acre parcel on the opposite side of Luahualei Naval Road, from its current location along the Waianae Coast of Oahu. In addition, this project calls for upgrading of the PVT recycling operations by installing two material recovery and processing lines. The document indicates that this facility is the only one on Oahu.

PVT's new facility will rely on renewable energy sources to power its operations. These power sources will include an enclosed gasification unit and solar photovoltaic panels. The goal of this project is to satisfy Oahu's need for construction and demolition landfill and debris management.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. OP Comments on EISPN  
OP submitted a letter dated February 13, 2019. We note that the letter and response is included in the document.
2. Section 6 Land Use Plans, Policies and Controls Special Permit  
We note that this section contains information relating to the Special Permit guidelines for determining "unusual and reasonable use" for the proposed relocation of the C&D management facility. This section also indicates that additional information will be

submitted with the Special Permit application. Since this project proposes a non-permitted use within the State Agricultural District, the EIS should be a detailed discussion of current and past uses on this land in particular relative to agricultural uses. While Figure 6-1 shows Land Study Bureau (LSB) productivity ratings, we note there are "Prime" and "Other Important Agricultural Lands" designations for the Agricultural Lands of Importance in the State of Hawaii (ALISH). The acreage in these categories should be provided along with any discussion of current and past uses.

3. Section 5 Historic, Socioeconomic, and Scenic Resources.

The DEIS does not include comments from the State Historic Preservation Division (SHPD). The document includes information on other studies that were done within and about the site. However, SHPD has not directly commented on the information, methodology and conclusions that are reached by the document. We strongly suggest that prior to proceeding with processing of the Special Permit that the applicant contact SHPD obtain their review and comments.

We also note that the DEIS alludes to but does not make specific findings regarding the extent to which traditional and customary native Hawaiian rights are exercised in the project area as required by the Hawaii Supreme Court's holding in *Ka Paakai O Ka Aina v. Land Use Commission, State of Hawaii*, 7 P.3d 1068, 94 Hawaii 31 (2000). The DEIS should include an analysis and finding on this issue.

Thank you for allowing us the opportunity to review the DEIS. If you have any questions or comments, please contact Lorene Maki of our office at (808) 587-2888 or email to [lorene.k.maki@hawaii.gov](mailto:lorene.k.maki@hawaii.gov).

Sincerely,

A handwritten signature in dark ink, reading "Mary Alice Evans". The signature is fluid and cursive, with the first name "Mary" and last name "Evans" clearly legible.

Mary Alice Evans  
Director

c: Franz Krintz, City and County of Honolulu, Department of Planning and Permitting,  
Community Planning Branch, Planning Division

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## ***Draft EIS Comment Letters and Responses - City and County of Honolulu***

Department of Community Services

Department of Design and Construction

Department of Facility Maintenance, Division of Road Maintenance

Department of Parks and Recreation

Department of Planning and Permitting

Honolulu Fire Department

Nanakuli-Mailii Neighborhood Board No. 36

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January 10, 2020

Director Pamela A. Witty-Oakland  
City and County of Honolulu  
Department of Community Services  
925 Dillingham Boulevard, Suite 200  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility Relocation  
Draft Environmental Impact Statement (EIS)

Dear Pamela Witty-Oakland:

Thank you for your letter regarding the PVT Integrated Solid Waste Management Facility Relocation Draft EIS.

We note that the Proposed Project will have no adverse impact on Department of Community Services' activities or projects.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

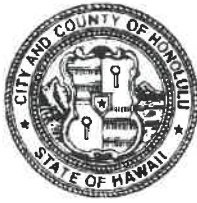
Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF COMMUNITY SERVICES  
**CITY AND COUNTY OF HONOLULU**

925 DILLINGHAM BOULEVARD, SUITE 200 • HONOLULU, HAWAII 96817  
PHONE: (808) 768-7762 • FAX: (808) 768-7792  
[www.honolulu.gov/dcs](http://www.honolulu.gov/dcs)



KIRK CALDWELL  
MAYOR

PAMELA A. WITTY-OAKLAND  
DIRECTOR

REBECCA J.I. SOON  
DEPUTY DIRECTOR

August 15, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

**SUBJECT:** Draft Environmental Impact Statement (EIS), PVT Integrated Solid Waste Management Facility Relocation, pursuant to the EIS law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11 Chapter 200)

Thank you for the Draft Environmental Impact Statement (EIS), PVT Integrated Solid Waste Management Facility Relocation project.


Applicant Land owner:	PVT Land Company, Ltd. (PVT)/Leeward Land Company Ltd., and affiliate of PVT
Consultant:	Hart Crowser, Inc. 7 Waterfront Plaza 500 Ala Moana Boulevard, Suite 7-240 Honolulu, Hawaii 96813 Attention: Karl Bromwell
Accepting Authority:	Department of Planning and Permitting 650 South King Street, 7 <sup>th</sup> Floor Honolulu, Hawaii 96813 Attention: Franz Krintz, AICP
Agent:	Hart Crowser, Inc. Attention: Karl Bromwell
Tax Map Key:	(1) 8-7-009:007

Mr. Karl Bromwell  
August 15, 2019  
Page 2

Our review of the documents indicated that the proposed project will have no adverse impact on any Department of Community Services' activities or projects in the surrounding neighborhood.

Thank you for providing us the opportunity to comment on this matter.

Sincerely,



Pamela A. Witty-Oakland  
Director

cc: Franz Krintz, AICP  
Department of Planning and Permitting

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January 10, 2020

Robert J. Kroning, P.E., Director  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street, 11<sup>th</sup> Floor  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Director Kroning:

Thank you for your letter regarding the PVT ISWMF Relocation Draft EIS. We understand that you have no comments at this time.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



ROBERT J. KRONING, P.E.  
DIRECTOR

MARK YONAMINE, P.E.  
DEPUTY DIRECTOR

August 6, 2019

Hart Crowser, Inc.  
ATTN: Karl Bromwell  
7 Waterfront Plaza, 500 Ala Moana Blvd., Ste. 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell,

Subject: PVT Land Company, LTD Draft Environmental Impact Statement  
For the PVT Integrated Solid Waste Management Facility  
Relocation

Thank you for the opportunity to review and comment. The Department of Design and Construction does not have any comments at this time.

Should you have any further questions, please contact me at 768-8480.

Sincerely,

A handwritten signature in black ink, appearing to read "R. J. Kroning", is written over the printed name.

Robert J. Kroning, P.E.  
Director

RJK:ms(780302)

cc: Franz Kraitz, Department of Planning and Permitting

January 10, 2020

Ross S. Sasamura, P.E.  
Director and Chief Engineer  
City and County of Honolulu  
Department of Facility Maintenance  
1000 Uluohia St.  
Kapolei, Hawaii 96707

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Sasamura:

Thank you for your letter regarding the PVT ISWMF Relocation Draft EIS. We understand that you have no comments at this time.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**

1000 Ulu'ohia Street, Suite 215, Kapolei, Hawaii 96707  
Phone: (808) 768-3343 • Fax: (808) 768-3381  
Website: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



ROSS S. SASAMURA, P.E.  
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN  
DEPUTY DIRECTOR

IN REPLY REFER TO:  
DRM 19-451

August 1, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza, 500 Ala Moana Boulevard, Ste 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Draft Environmental Impact Statement  
PVT Integrated Solid Waste Management Facility Relocation  
TMK: (1) 8-7-009:007

Thank you for the opportunity to review and comment on the subject project.

We have no comments at this time, as we do not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

A handwritten signature in black ink, appearing to read "Ross S. Sasamura".

Ross S. Sasamura, P.E.  
Director and Chief Engineer

cc: Department of Planning and Permitting - Frank Krintz

January 10, 2020

Michele K. Nekota  
Director  
City and County of Honolulu  
Department of Parks and Recreation  
1000 Uluohia St., Suite 309  
Kapolei, Hawaii 96707

RE: PVT Integrated Solid Waste Management Facility Relocation  
Draft Environmental Impact Statement (EIS)

Dear Director Nekota:

Thank you for your letter regarding the PVT Integrated Solid Waste Management Facility Relocation Draft EIS.

We note that the Proposed Project will have no impact on the Department of Parks and Recreation's activities or projects.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF PARKS & RECREATION  
**CITY AND COUNTY OF HONOLULU**

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707  
Phone: (808) 768-3003 • Fax: (808) 768-3053  
Website: [www.honolulu.gov](http://www.honolulu.gov)



KIRK CALDWELL  
MAYOR

MICHELE K. NEKOTA  
DIRECTOR

JEANNE C. ISHIKAWA  
DEPUTY DIRECTOR

July 30, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Blvd. Ste. 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

SUBJECT: Draft Environmental Assessment  
PVT Integrated Management Facilities Relocation  
Waianae, Oahu

Thank you for the opportunity to review and comment on the subject Draft Environmental Assessment.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any program or facility of the Department, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact John Reid, Planner at 768-3017.

Sincerely,

A handwritten signature in black ink, appearing to read "Michele K. Nekota", is written over a faint, stylized outline of the signature.

Michele K. Nekota  
Director

MKN:jr  
(780240)

cc: Franz Kraintz, Planner VI  
Department of Planning and Permitting



January 10, 2020

Kathy K. Sokugawa, Acting Director  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Kathy K. Sokugawa:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. PVT will obtain grading, grubbing, and stockpiling permits for initial construction activities if undertaken prior to issuance of the Solid Waste Management Permit (SWMP).
2. PVT will develop a drainage report for initial construction activities if undertaken prior to issuance of the SWMP.
3. The Final EIS describes the features and operations to remain or be added to the PVT ISWMF site post-closure. Section 2.4.5, *Closure of PVT ISWMF C&D Landfill* describes closure of the PVT ISWMF without the Proposed Action, as permitted by PVT's Conditional Use Permit Major and SWMP. Section 2.5.1, *Proposed Uses and Activities*, Figure 2-3, *Site Development Plan*, and *Description of Major Operational Areas and Structures in the Site Development Plan* describes operations and structures to remain at the PVT ISWMF post-closure with the Proposed Action.

The following edits were made to the Final EIS to address this comment (text changes underlined in red):

Section 2.4.5, *Closure of PVT ISWMF C&D Landfill*

The closed PVT ISWMF would be maintained as open space during the post-closure period. The existing administrative office would be maintained as a headquarter for managing post-closure activities. Accessory facilities necessary for post-closure monitoring and site security include: electrical equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F) and discharge points, water tanks, and wells (See Figure 2-2, Existing Conditions). PVT would retain the right to construct a 2-acre PV system and/or a gasification unit.

#### Section 2.5.1, *Proposed Uses and Activities*

When all disposal capacity has been exhausted, PVT would close their existing facility and install final cover on all areas of the C&D landfill, as described in Section 2.4.5, *Closure of PVT ISWMF C&D Landfill*. Facilities and operations which are required for the support of post-closure maintenance activities would remain on the site and include: administrative office, electrical equipment, existing dwelling, landfill access road, leachate sump, parking shelter with PV, perimeter fencing, PVT ISWMF entrance, security hut, storm water basins (A-F) and discharge points, water tanks, and wells.

Some equipment and operations would remain on the PVT ISWMF site to support the Proposed Action, including the equipment maintenance facility, MRD-1, scale house, and scales (See Figure 2-3 and Description of Major Operational Areas and Structures in Site Development Plan). These back-up systems are necessary for the continuity of PVT operations in the event of an emergency or natural disaster. PVT would retain the right to construct a 2-acre PV system and/or a gasification unit on the existing site in their efforts to reach energy independence.

4. The Final EIS Section 2.4.5, *Closure of PVT ISWMF C&D Landfill* provides a timeline for closure of the existing landfill, period of post-closure care, and post-closure land use options.

The following edits were made to the Final EIS to address this comment (text changes underlined in red):

#### Section 2.4.5, *Closure of PVT IWMF C&D Landfill*

When all disposal capacity has been exhausted, PVT would close and install final cover on all areas of the C&D landfill. It is anticipated that the landfill will reach capacity in approximately 7-12 years, depending on the economy and construction industry. In an emergency, hurricane, or other natural disaster, a large quantity of debris could be accepted and landfilled, which would shorten the life of the landfill.

[...]

PVT is responsible for up to 30 years of post-closure care of the Phases I/II landfill. Post-closure activities include monitoring and maintenance of the landfill final cover and stormwater management systems, leachate collection and removal system (LCRS) operation, and groundwater monitoring. The HDOH requires that the integrity of the landfill cover be maintained during the post-closure period. Vegetative growth that may penetrate the cover is not permitted on the closed landfill.

[...]

PVT would continue to work with the community at the time of closure to explore potential post-closure land use options for the closed ISWMF. PVT will engage the community through the neighborhood board process. The PVT ISWMF site is and will remain private land. PVT's SWMP and Closure Plan restrict site access for public safety and to safeguard the integrity of the landfill cap and landfill monitoring systems.

5. The setbacks from waste disposal and processing facilities are defined as follows: “No waste disposal and processing facility shall be located within 1,500 feet of any zoning lot in a country, residential, apartment, apartment mixed use or resort district. When it can be determined that potential impacts will be adequately mitigated due to prevailing winds, terrain, technology or similar considerations, this distance may be reduced, provided that at no time shall the distance be less than 500 feet.” (Sec. 21-5.680 Added by Ord. 99-12)

The Final EIS Section 6.3.2.3, *LUO Article 5, Specific Use Development Standards* demonstrates that potential impacts will be adequately mitigated and, therefore, the setback distance reduced to 750 feet.

The following edits were made to the Final EIS to address this comment (text changes underlined in red):

Section 6.3.2.3, *LUO Article 5, Specific Use Development Standards*

~~As described in Section 2.5.2, Site Development Plan and shown on Figure 2-3, there would be a 750-foot buffer between the material disposal and processing facilities and the southern boundary of the Project Site. This buffer is consistent with the current PVT ISWMF and SWMP. Potential impacts would be adequately mitigated based on winds, terrain, technology, and years of responsible waste management experience at the PVT ISWMF. Potential impacts associated with noise, odor, litter, and fugitive dust are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures have been proven to be effective at the PVT ISWMF.~~

~~PVT has commissioned nine air quality and human health risk assessments for the PVT ISWMF over the last 15 years. There is no evidence that the dust generated by PVT poses a health risk, (Section 3.5 Air Quality).~~

~~As described in Section 2.5.2, Site Development Plan and shown on Figure 2-3, there would be a 750-foot buffer between the material disposal and processing facilities and the southern boundary of the Project Site. This buffer complies with Sec. 21-5.680 Added by Ord. 99-12 because:~~

- ~~Potential impacts would be adequately mitigated based on winds, terrain, technology, and operational best management practices.~~
- ~~Support structures and operations (such as the entrance and scalehouse) are allowed within the setback area as they do not constitute a “waste disposal and processing facility.”~~

~~Potential impacts will be adequately mitigated:~~

~~Potential impacts associated with fugitive dust, odor, noise, traffic, and litter are and would be avoided and minimized through the implementation of the Operations Plan and site design, as described in Section 2.5, Description of the Proposed Action. The measures~~

have been proven to be effective at the PVT ISWMF.

Section 3.5, Air Quality, PVT has commissioned nine air quality and human health risk assessments for the PVT ISWMF over the last 15 years. Two of these reports are described in further detail below. In sum, the reports conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that there is no evidence that the dust generated by PVT poses a health risk. PVT would continue to implement dust control measures at the Project Site to minimize the generation and dispersal of fugitive dust as described in Section 2.5.7.2, Dust Control. Odor is not an issue with the Proposed Action due to the inert nature of C&D debris. No impacts to air quality are anticipated.

When PVT first proposed mining of the Phase I landfill cells at its current ISWMF, HDOH was concerned that mining in the cells closest to the residences could adversely affect air quality. Phase I is the area of the current ISWMF that begins at 750 feet from the PVT boundary. DOH required PVT to conduct an air monitoring study at the PVT fenceline using EPA methods both before mining (to establish a baseline) and during mining (to determine if there was any adverse impact). The air monitoring study concluded that the air quality at the PVT fenceline was the same as regional air quality elsewhere on Oahu (and attaining EPA and state standards) both before and during the mining in Phase I.

Fugitive dust impacts of future landfill operations at the Project Site were evaluated by Jim Morrow in a 2019 Air Quality Impact Report completed for the PVT Integrated Solid Waste Management Facility Relocation Project (Appendix B). Morrow used the U.S. EPA-recommended computer model, AERMOD, to evaluate emissions from landfill operations at changing elevation and assumed a 750-foot buffer zone. The results of the modeling analysis are summarized in (Table 3-19) and indicate compliance with federal and state ambient air quality standards. Morrow concluded “PVT’s proposed relocation of operations will not have a significant impact on existing air quality.”

With respect to noise, the Environmental Noise Assessment Report (Appendix D) was prepared by D.L. Adams for the Proposed Action. The study considers all sources of noise, including traffic, based on the design of the Proposed Action, which includes the 750- foot buffer area. The sound propagation models were created with a conservative approach that assumed worst case scenarios, in which all sources of noise operating simultaneously and continuously through the operational time period. The noise study concludes that noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or “just barely perceptible”).

Section 4.1, Transportation discusses potential impacts of the Proposed Action on traffic. The Proposed Action would not increase traffic to the Project Site, which is limited by their SWMP at 300 haul trucks per day. An independent consultant prepared a Traffic Impact Analysis Report (Appendix F) for the Proposed Action. The report concludes that the Proposed Action is expected to increase the traffic at the intersection of Farrington

Highway and Lualualei Naval Road by about 1.0% and 0.8%, during the AM and PM peak hours of traffic, respectively. According to professional traffic engineering standards, this is a less than significant adverse impact on roadway traffic.

Section 4.2, Solid Waste and Litter addresses potential impacts of the Proposed Action on wind-blown litter. Unlike MSW, the PVT ISWMF waste is heavy and unlikely to be a litter nuisance. PVT implements a litter control program that includes inspections, a litter control fence, and daily cover, as described in Section 2.5.7.1, Litter Control. Additional procedures are implemented in the event of a pending wind storm. No impacts related to litter are anticipated.

Although the mitigation would satisfy the minimum setback of 500 feet (Sec. 21-5.680 Added by Ord. 99-12), the Proposed Action was designed to comply with the setback provisions of the PVT SWMP, which states that C&D disposal shall not occur within a buffer area of 750 ft. from the makai property line.

Allowable operations within the setback:

The land use ordinance does not define waste disposal and processing facility or the operations that are allowed within the setback zone. Therefore, we rely on HDOH's definitions of disposal and processing.

The Proposed Action has only support structures (such as the entrance and scalehouse) within the first 750 feet. There are no waste disposal or processing activities within the Proposed Action's buffer area. Under the solid waste rules, "disposal" is defined as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste onto any land or water so that the solid waste, or any constituent thereof, may enter the environment, be emitted into the air, or discharged into any water, including ground waters" (HAR § 11-58.1-03). Such activities take place in the landfill cells. Further, "processing" is defined as "an operation to convert solid waste into a useful product or to prepare it for disposal" (HAR § 11-58.1-03). Such activities do not take place in the entrance and scalehouse area of the facility.

6. The Final EIS will include a detailed Landscaping Plan as Appendix I.

The Landscaping Architect considered the available space and growing conditions in developing the Landscaping Plan. As described in Section 6.2.2.7, *Agricultural Productivity Ratings*, the soils at the Project Site are rocky stony soils that are not suitable for agriculture. The arid climate and limited water availability determine the types and number of plants suitable for the site.

Within the 750-foot buffer zone, native Hawaiian plants that are suitable for the dry environment would be planted near the entrance of the Project Site. Drought tolerant trees and shrubs would be planted around the parking and administrative areas and along the west and south boundaries of the Project Site. The buffer zone would also include stormwater drainage and basin, access roads and parking, which cannot be landscaped.


The following edits were made to the Final EIS to address this comment:

Replace Appendix I, *Conceptual Landscaping Layout* with Appendix I, *Landscaping Plan*.  
Additional drought-tolerant landscaping was added in the 750-foot buffer zone.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

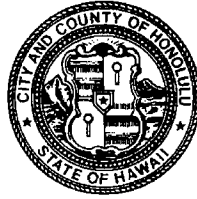
A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honoluludpp.org](http://www.honoluludpp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



KATHY K. SOKUGAWA  
ACTING DIRECTOR

TIMOTHY F. T. HIU  
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI  
DEPUTY DIRECTOR

2019/ED-5 (FK)

September 6, 2019

Mr. Karl Bromwell  
Principal  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

**SUBJECT: Draft Environmental Impact Statement for the PVT  
Integrated Solid Waste Management Facility Relocation-Nanakuli,  
Waianae District, Oahu  
Tax Map Key 8-7-009: 007**

We have reviewed the Draft Environmental Impact Statement (EIS), received on July 11, 2019, for the PVT Integrated Solid Waste Management Facility Relocation ("Project") in Nanakuli, Waianae District of Oahu. The City and County of Honolulu, Department of Planning and Permitting (DPP), offers the following comments:

1. Initial construction activities for the proposed landfill may require grading, grubbing, and stockpiling permits. A grading permit may be required for the final cover that will be placed prior to landfill closure.
2. A drainage report may be required at a later date. The Project shall comply with the DPP's Rules Relating to Water Quality. These Rules can be found on the City's website at:  
<http://www.honoluludpp.org/ApplicationsForms/StormWaterQuality.aspx>
3. Section 2.4.5 of the Draft EIS states the existing administrative office would remain for managing post-closure activities. Section 2.5.1 states the existing materials recovery and diversion process line (MRD-1) would remain to be used when MRD-2 or MRD-3 on the new site are not operational. Figure 2-3 shows a future gasification unit and future photovoltaic modules on the existing landfill site. Section 2.6.1 states the existing MRD-1 and scales will also remain. In the Final EIS, please consistently describe all features of the operation to remain or



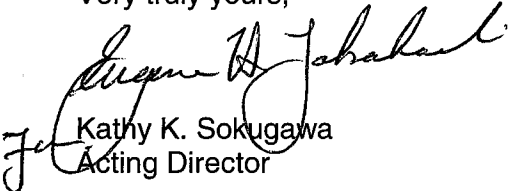
Mr. Karl Bromwell  
September 6, 2019  
Page 2

be added at the existing landfill site post-closure in each section of the document where it is discussed. Please also explain in the Final EIS why these operations cannot be relocated to the new site so that the existing landfill can be entirely preserved as open space.

4. Provide an estimated date for closure of the existing facility and the duration of the post-closure period. Section 2.4.5 states PVT would work with the community to explore post-closure land use options. Please specify how PVT would engage the community in this process and how long after closure can the community expect to realize some beneficial re-use of the closed facility for future, publicly accessible, recreational open space.
5. Section 2.5.2.1 states there would be a 750-foot buffer zone from the residential area south of the site. As was stated in Item No. 6 of our comments on the EIS Preparation Notice, Section 21-5.680 of the Land Use Ordinance requires a 1,500-foot buffer between the waste disposal and processing facility and any zoning lot in a Country, Residential, Apartment, Apartment Mixed Use, or Resort Districts. In the Final EIS, explain how it was determined that the potential impacts associated with persistent fugitive dust, truck traffic, speeding, and noise complaints from neighbors adjacent to the existing facility, will be sufficiently mitigated at the proposed site to justify why the 1,500-foot buffer should be reduced.
6. Of the 750 feet of proposed buffer shown on the Landscape Plan in Appendix I, only a 100-foot planting strip, with what appears to be one row of trees, is provided. The Final EIS should provide a more detailed landscape plan at a larger scale. The Final EIS should substantiate why the remainder of the 750-foot buffer is not planted with trees and tall shrubs to help screen and buffer the proposed landfill operations.

Should you have any questions, please contact Franz Krintz, of our staff, at 768-8046, or Dina Wong, at 768-8053.

Very truly yours,

  
Kathy K. Sokugawa  
Acting Director

KKS:ah

January 10, 2020

Socrates Bratakos  
Assistant Chief  
City and County of Honolulu  
Honolulu Fire Department  
636 South Street  
Honolulu, Hawaii 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Bratakos:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. EIS Section 2.5.6.5, *Fire Protection* discusses fire protection and compliance of the Proposed Action with applicable NFPA regulations, including NFPA 1, 2012 Edition, Sections 18.2.3.2.2, 18.2.3.2.2.1. and 18.2.3.2.1.
2. PVT will coordinate with the Honolulu Fire Department to comply with applicable NFPA regulations, including NFPA 1, 2012 Edition, Section 18.3.1, as amended.
3. EIS Section 2.5.6.5, *Fire Protection* discusses compliance of the Proposed Action with applicable NFPA regulations, including NFPA 1, 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.
4. PVT will submit civil drawings to Honolulu Fire Department for review, as needed.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: [www.honolulu.gov/hfd](http://www.honolulu.gov/hfd)

KIRK CALDWELL  
MAYOR



MANUEL P. NEVES  
FIRE CHIEF

LIONEL CAMARA JR.  
DEPUTY FIRE CHIEF

August 14, 2019

Mr. Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza  
500 Ala Moana Boulevard, Suite 7-240  
Honolulu, Hawaii 96813

Dear Mr. Bromwell:

Subject: Draft Environmental Impact Statement  
PVT Integrated Solid Waste Management Facility Relocation  
Waianae, Hawaii 96792  
Tax Map Key: 8-7-009: 007

In response to a letter from PVT Land Company Limited dated July 19, 2019, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:

1. 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 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2012 Edition, Section 18.2.3.2.1.)

2. 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

Mr. Karl Bromwell  
Page 2  
August 14, 2019

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) 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 [Authority Having Jurisdiction]. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)
4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at 723-7151 or [wmasuda@honolulu.gov](mailto:wmasuda@honolulu.gov).

Sincerely,



SOCRATES D. BRATAKOS  
Assistant Chief

SDB/TC:gl

cc: Franz Krintz, Planner VI  
Department of Planning and Permitting

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January 10, 2020

Cynthia K.L. Rezentes, Chair  
Nanakuli-Mailii Neighborhood Board No. 36  
c/o Neighborhood Commission  
925 Dillingham Boulevard Suite 160  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Ms. Rezentes:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Thank you for giving PVT the opportunity to present at the July Nanakuli-Mailii Neighborhood Board No. 36 meeting and to attend the August regular meeting and September 4, 2019 special meeting to hear community testimony, both in favor of and opposition to the Proposed Action.

The Final EIS will address the substantive discussion points and concerns expressed by the Board and community, including those listed in your letter.

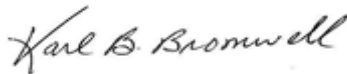
We appreciate and note the Board's position regarding the Draft EIS: **The Board supports PVT's efforts in their recycling efforts and service to our community, however, the NB#36 opposes their request for relocation, as stated in their Draft EIS statement and urges entities, especially, City, State and Federal governments to assist PVT in their efforts to find a suitable location as they help our State achieve a zero waste society.**

PVT will continue to update the Nanakuli-Mailii Neighborhood Board on the progress of the project after the Final EIS is published.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



NANAKULI-MAILI NEIGHBORHOOD BOARD NO. 36

C/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD SUITE 160 • HONOLULU, HAWAII 96817  
TEL: (808) 768-3710 • FAX: (808) 768-3711 • INTERNET: <http://www.honolulu.gov/nco>

September 5, 2019

Franz Kraintz, AICP  
Email: [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)  
Tel: (808) 768-8046  
7 th Floor, 650 South King Street  
Honolulu, HI 96813

**Re: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation**

Dear Mr. Kraintz,

The Nanakuli-Maili Neighborhood Board No. 36 held a special meeting on September 4, 2019 to hear the community's voice and determine a position for our Neighborhood Board to take regarding the above subject matter.

We did have testimony from 70+ individuals and organizations, both in favor of the DEIS and opposed to the DEIS. Many of the concerns raised for the continuation of the plan, was the tremendous support PVT has shown within our community for local organizations and schools along with being a great employer in providing job opportunities for many of our residents. Of the concerns raised in opposition to supporting the DEIS were; there are still dust concerns regarding the current operations and don't want to see that for the new location, "enough is enough" with respect to the many years of hosting various landfills/dumps in our community, health concerns that the business may have contributed to members of the community and health issues in general and environmental racism.

After receiving testimony from the community, the board members were offered an opportunity to provide their support or concerns. Subsequent to all being heard who wished to be heard, a motion was offered: **The Board supports PVT's efforts in their recycling efforts and service to our community, however, the NB#36 opposes their request for relocation, as stated in their Draft EIS statement and urges entities, especially, City, State and Federal governments to assist PVT in their efforts to find a suitable location as they help our State achieve a zero waste society.** The motion passed 5 Ayes- 3 Nays- 0 Abstentions- 1 Absent.

If there are any questions, pertaining to this position, please contact me at [rezentesc@aol.com](mailto:rezentesc@aol.com) or 497-1432.

Sincerely,

Cynthia K.L. Rezentes, Chair  
Nanakuli-Maili Neighborhood Board No. 36

Cc: Stephen E. Joseph



Franz Kraintz, AICP

September 5, 2019

Page 2 of 2

Hart Crowser, Inc., Karl Bromwell

Councilmember Pine

Senator Shimabukuro

Representative Eli

Representative Gates

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## ***Draft EIS Comment Letters and Responses - Other Interested Stakeholders and Organizations***

Hawaiian Electric Company

Hawaii Teamsters and Allied Workers, Local 996

Hawaii's Technicians for Film, Television, Stage and Projection, Local 665

International Association of Heat and Frost Insulators and Allied Workers, Local 132

International Brotherhood of Electrical Workers, Local 1186

International Longshore and Warehouse Union, Local 142

KAHEA: The Hawaiian-Environmental Alliance

Ke One O Kakūhihewa, Oahu Council of the Association of Hawaiian Civic Clubs

MA'O Organic Farms

Prince Kūhiō Hawaiian Civic Club

Self-Help Housing Corporation of Hawaii

Sierra Club of Hawaii, Oahu Group

United Public Workers Union

Unite Here, Local 5

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January 10, 2020

Hawaiian Electric Company  
Attn: Rouen Liu, Permit Engineer  
P.O. Box 2750  
Honolulu, HI 96840  
808-543-7245

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Rouen Liu:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

We understand that Hawaiian Electric's Kahe-Mikilua 46kV line is currently in use. This correction was made to the Final EIS.

PVT will work with Hawaiian Electric to relocate the line, which may require Public Utilities Commission approval. HECO will be granted 24/7 access to the relocated line and to other HECO facilities used to provide service to the PVT facility. Hawaiian Electric has existing easements and facilities on the subject property and will be allowed continued access for maintenance of those facilities.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** Liu, Rouen

**Sent:** Tuesday, September 3, 2019 3:20:15 PM (UTC-10:00) Hawaii

**To:** EIS Comments; [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

**Cc:** Ogata, James; Stellmacher, Robert; Lum, Mike; Oda, Wendy; Kuwaye, Kristen

**Subject:** PVT Integrated Solid Waste Management Facility Relocation Project - comments from Hawaiian Electric

Dear Mr. Bromwell,

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project. We do offer the following comments:

Section 2.5.6.3 states that there is a 44-kilovolt power line, reported to be currently unused, that crosses the southern portion of the Project Site.

- This is Hawaiian Electric's Kahe-Mikilua 46kV line and the portion that crosses the site is currently in use.
- The lead time for the relocation of that line is 2-3 years and will require Public Utilities Commission approval.
- The relocated line will need to have vehicular access along the entire length.

Section 2.5.6.4 states that the main gate would be locked after hours.

- Hawaiian Electric will require 24/7 access to the relocated line shown in Figure 2-9 and to any other HECO facilities used to provide service to the PVT facility.

As stated above, Hawaiian Electric has existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities. We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed PVT Integrated Solid Waste Management Facility Relocation project comes to fruition, please continue to keep us informed.

Should there be any questions, please contact me at 543-7245.

Thank you,

Rouen Liu  
Permit Engineer  
Hawaiian Electric Company

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January 10, 2020

Hawaii Teamsters & Allied Workers - Local 996  
Attn: Cody Sula, Government Affairs Liaison  
1817 Hart Street  
Honolulu, Hawaii 96819-3205

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Cody Sula:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

The Proposed Action does not pose a health concern to the community. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT is not a hazardous waste landfill. PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable Federal and State laws.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;



- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

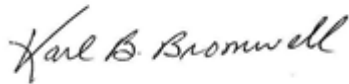
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# HAWAII TEAMSTERS & ALLIED WORKERS LOCAL 996

Affiliated with the International Brotherhood of Teamsters

[Local996@hawaiiitemsters.com](mailto:Local996@hawaiiitemsters.com)

1817 Hart Street  
Honolulu, HI 96819-3205

Telephone: (808) 847-6633  
Fax: (808) 842-4575

September 6, 2019

*Via E-mail* Ifkrintz@honolulu.gov

City and County of Honolulu Department of Planning and Permitting  
650 South King Street, 7th Floor Honolulu , HI 968 13

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility CISWMF) to Still Remain in Nanakuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krintz, AICP:

The Hawaii Teamsters and Allied Workers Local 996 represents 7,000 working union members and their families, many of whom reside in Nanakuli and the greater community of Wai 'anae. We stand in solidarity to say no more landfills in our communities (Wai'anae Communities Sustainable Communities Plan, 2012, 4-17). There is a public health crisis in Nanakuli and Ma'ili. According to the Center for Disease Control/National Center for Health Statistics Neighborhood Life Expectancy Project, our members and their families within 2 miles of the current PVT Landfill live 10 years less than the state average of 82 years, being the 2nd and 3rd lowest life expectancies in the entire state. This is unacceptable. Every community in Hawai'i as a matter of fairness and decency deserves a "clean and healthful environment"(HI State Constitution Article XI, Section 9; In re Maui Elec. Co., 2017 Haw.) PVT currently operates only 750 feet from residences and its proposed expansion is more of the same (Draft Environmental Impact Statement: PVT Integrated Solid Waste Management Facility - Expanded Recycling, Landfill, Grading and Renewable Energy Project). This buffer zone is not enough, no other landfill in Hawai'i is so close that within two miles of the landfill operations are numerous residences, schools, places of worship, parks, stores, medical clinics, and kupuna housing that over 18,000 people daily live, work, and play.

The global scientific community affirms what the community of Waianae has been living through -- especially those that live, work, and

**WAYNE K.S. KAULULAAU**  
President/Principal Officer

**RYAN YOSHIDA**  
Secretary – Treasurer

**FREDERICK LIVA**  
Vice President

**ANTHONY "BULLY" BADAYOS**  
Recording Secretary

**WENDY NAILE**  
Trustee

**JAMES "KIMO" LAROYA JR.**  
Trustee

**WALTER FOX III**  
Trustee



# HAWAII TEAMSTERS & ALLIED WORKERS LOCAL 996

Affiliated with the International Brotherhood of Teamsters

[Local996@hawaiiiteamsters.com](mailto:Local996@hawaiiiteamsters.com)

1817 Hart Street  
Honolulu, HI 96819-3205

Telephone: (808) 847-6633  
Fax: (808) 842-4575

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play in Nanakuli and Lualualei-- that landfills are a health hazard (See Vrijheid M., Health effects of residence near hazardous waste landfill sites: a review of epidemiologic literature. *Environ Health Perspect*, 2000; Njoku PO, Edokpayi JN, Odiyo JO, Health and Environmental Risks of Residents Living Close to a

Landfill: A Case Study of Thohoyandou Landfill, Limpopo Province, South Africa. *Int J Environ*

*Res Public Health*, 2019; Waste and Human Health: Evidence and needs, World Health Organization Nov 2015).

We ask that the Department of Planning and Permitting heed the voices of our community and support their efforts for a "clean and healthful environment." Please do not allow PVT to relocate to TMK: (1) 8-7-009:007. We support the relocation of the PVT Landfill to an isolated area that *should and still needs to be identified and vetted* in the 2.7 Alternatives to the Proposed Action in the Draft EIS. Stop the **public health** crisis in Nanakuli and Ma'ili.

Sincerely,

Cody Sula

Hawaii Teamsters and Allied Workers, Local 996

Government Affairs Liaison

January 10, 2020

Hawaii's Technicians for Film, Television, Stage and Projection - Local 665  
501 Sumner Street #605  
Honolulu, Hawai'i 96817  
Attn: Irish Barber, Business Representative

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Irish Barber:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

The Proposed Action does not pose a health concern to the community. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing). The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and

- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

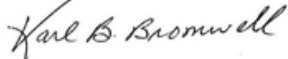
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



**Local 665**  
**HAWAII'S TECHNICIANS**  
for  
**FILM, TELEVISION, STAGE AND PROJECTION**  
Since 1937

INTERNATIONAL ALLIANCE OF THEATRICAL STAGE EMPLOYEES, MOVING PICTURE TECHNICIANS, ARTISTS AND ALLIED CRAFTS  
OF THE UNITED STATES, ITS TERRITORIES AND CANADA, AFL-CIO, CLC

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September 6<sup>th</sup>, 2019

Mr. Franz Kraintz – [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nanakuli – TMK: (1) 8-7-009:007


Aloha, Mr. Kraintz, AICP:

The IATSE Local 665, AFL-CIO, stands in solidarity with our over 100 active union workers who reside in the Wai'anae Moku and oppose having ISWMF relocate their next facility there.

For 20 years, the ISWMF has operated within 750 feet from homes, seriously jeopardizing the health of residents in the neighborhood, and the expansion of the proposed facility will still be within an unsafe distance from homes, schools and play areas.

Please do not allow PVT to relocate to TMK: (1) 8-7-009:007. We support identifying and vetting alternative areas that do not present a health hazard to the community. Please choose people over profit.

Mahalo Nui,

  
Irish Barber  
Business Representative

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January 10, 2020

International Association of Heat and Frost Insulators and Allied Workers  
Local 132  
1019 Lauia Street, Bay #4  
Kapolei, HI 96707  
Attn: Doug Fulp, Business Manager

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Doug Fulp:

Thank you for your letter regarding the PVT Integrated Solid Waste Management Facility Relocation Draft EIS.

We acknowledge that International Association of Heat and Frost Insulators and Allied Workers Local 132 supports the PVT ISWMF Relocation project.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



INTERNATIONAL ASSOCIATION OF  
**Heat & Frost Insulators  
& Allied Workers**  
Honolulu Headquarters, Local 132

1019 Lauia Street, Bay #4  
Kapolei, HI 96707  
Phone: (808) 521-6405  
Fax: (808) 523-9861  
Email: [awl132@insulators.org](mailto:awl132@insulators.org)  
Website: [insulatorslocal132.org](http://insulatorslocal132.org)

August 22, 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Krintz, AICP / (808) 768-8046  
[fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

Dear Mr. Krintz:

I am writing to comment on the Draft Environmental Impact Statement (DEIS) submitted by PVT Land Company (PVT). The Heat & Frost Insulators & Allied Workers Local 132 fully support PVT's relocation to a nearby site along Lualualei Naval Road.

The construction industry's contributions to the state are quantifiable: \$8.8 billion in construction projects generated more than \$4 billion to the state's GDP in 2017 alone. Construction has been a major source of job growth in Hawaii during the past decade, with Oahu's construction industry providing 26,000 jobs during the first quarter of 2019. PVT plays a vital role in keeping those economic numbers steady, since they operate the only construction and demolition (C&D) facility available for our use as an industry.

Once just a landfill, PVT now is the largest recycler in the state. Over 750,000 tons of construction and demolition debris were recycled on Oahu in 2017, more than the combined total of all other recycled debris, including glass, plastic, tires, batteries, electronics, green waste and food waste. PVT saves landfill space by recycling up to 80% of the debris delivered to their facility, and they even excavate and recycle previously buried debris.

Although PVT's waste diversion and reclamation practices extended the life of the C&D landfill, they are still running out of space due to the recent construction boom. With PVT initiating closure activities at their current site, it is absolutely imperative they are able to relocate operations to their new site, or else Oahu would be without a commercial C&D landfill. This could lead to increased costs for taxpayers and a possible erosion of services, such as LEED certification, if the City/County had to pay to operate their own C&D landfill.

The proposed relocation project will allow PVT to continue serving the construction industry for many years to come. PVT also plans to expand their renewable energy systems at the new location, to include more photovoltaic panels as well as a gasification system, so they can power their operations without being dependent on fossil fuels. This supports everyone's shared goal of sustainability and protection of our island's natural resources.

We ask that your department accept the forthcoming EIS, to ensure there are no impacts to the long-term vitality of the state's construction industry.

Sincerely,

Doug Fulp  
Business Manager, Heat & Frost  
Insulators & Allied Workers Local 132

January 10, 2020

International Brotherhood of Electrical Workers  
Local Union No. 1186  
1935 Hau Street, Room 401  
Honolulu, Hawaii 96819-5003  
Attn: Damien T.K. Kim

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Damien T.K. Kim:

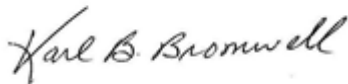
Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that the International Brotherhood of Electrical Workers Local Union No. 1186 supports the PVT ISWMF Relocation Project.

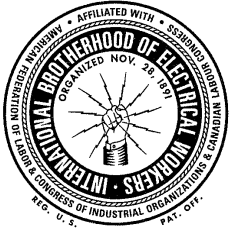
We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# International Brotherhood of Electrical Workers

**LOCAL UNION NO. 1186 • Affiliated with AFL-CIO**

1935 HAU STREET, ROOM 401 • HONOLULU, HI 96819-5003  
TELEPHONE (808) 847-5341 • FAX (808) 847-2224

August 23, 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Krintz, AICP / (808) 768-8046  
[fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

Dear Mr. Krintz,

The International Brotherhood of Electrical Workers Local Union 1186 AFL-CIO represents over 3800 members in the Electrical, Telecommunication, Cable, Motor/Marine, Civil service workers in the D.O.D., and Kamehameha Schools Faculty Association.

We thank you for this opportunity to comment on supporting the Draft Environmental Impact Statement (DEIS) prepared by PVT Land Company.

IBEW Local represents Hawaii's working men and women with the goal of creating job opportunities and maintaining a health and vibrant construction industry throughout our State. Our industry is heavily reliant on the continued existence of PVT's Integrated Solid Waste Management Facility (ISWMF) and that is why we strongly support their relocation to a new parcel along Lualualei Naval Road.

Our Unions support developers and landowners who practice smart growth techniques and are sensitive towards the need to manage and maintain our valuable natural resources. PVT is a leader in green technologies, while also providing a critical service to our industry, as the only commercial construction and demolition (C&D) debris management facility on Oahu. They are also the State's largest recycler' reusing up to 80% of the debris it receives.

Even with their recycling efforts, at some point, PVY will run out of room. Hawaii's construction industry continues to generate large amounts of C&D debris, and we rely on PVT to take care of it. Any closure of PVT's facility would leave Oahu without a C&D landfill, which would harm the economy and likely lead to illegal dumping around the island. If he City and County decided to seek alternatives. Such as operating their own C&D landfill or shipping debris off-island, the costs would be prohibitive to taxpayers.

We understand in its new location, PVT will continue the same best practices and adhere to the high standards that protect the community and our environment. Enabling PVT to continue to operations will help Hawaii's construction industry move confidently into the future, knowing we have a partner to support smart growth and sustainability. We encourage you to approve their forthcoming Environmental Impact Statement.

Thank you again for letting me comment in support.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Kim', with a stylized flourish at the end.

Damien T.K. Kim

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January 10, 2020

International Longshore & Warehouse Union (ILWU)  
Local 142  
451 Atkinson Drive  
Honolulu, Hawaii 96814  
Attn: Donna Domingo, President

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Donna Domingo:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

The Proposed Action does not pose a health concern to the community. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT is not a hazardous waste landfill. PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable Federal and State laws.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing). The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

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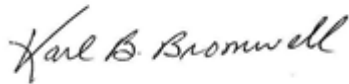
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# INTERNATIONAL LONGSHORE & WAREHOUSE UNION

LOCAL OFFICE • 451 ATKINSON DRIVE • HONOLULU, HAWAII 96814 • PHONE 949-4161

HAWAII DIVISION: 100 West Lanikaula Street, Hilo, Hawaii 96720 • OAHU DIVISION: 451 Atkinson Drive, Honolulu, Hawaii 96814  
MAUI COUNTY DIVISION: 896 Lower Main Street, Wailuku, Hawaii 96793 • KAUAI DIVISION: 4154 Hardy Street, Lihue, Hawaii 96766  
HAWAII LONGSHORE DIVISION: 451 Atkinson Drive, Honolulu, Hawaii 96814

**LOCAL 142**

September 5, 2019

Via E-mail | [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7th Floor  
Honolulu, Hawaii 96813

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007


Aloha Mr. Franz Kraintz, AICP:

The ILWU Local 142 stands in solidarity with our over hundreds of union members that reside in Nānākuli and the greater community of Wai‘anae moku to say no more landfills in our communities (Wai‘anae Communities Sustainable Communities Plan, 2012, 4-17). There is a **public health crisis** in Nānākuli and Mā‘ili. According to the Center for Disease Control/National Center for Health Statistics Neighborhood Life Expectancy Project, our members and their families within 2 miles of the current PVT Landfill live 10 years less than the state average of 82 years, being the 2nd and 3rd lowest life expectancies in the entire state. This is unacceptable. Every community in Hawai‘i as a matter of fairness and decency deserves a “clean and healthful environment” (HI State Constitution Article XI, Section 9; In re Maui Elec. Co., 2017 Haw.) PVT currently operates only 750 feet from residences and its proposed expansion is more of the same (Draft Environmental Impact Statement: PVT Integrated Solid Waste Management Facility - Expanded Recycling, Landfill, Grading and Renewable Energy Project). This buffer zone is not enough, no other landfill in Hawai‘i is so close that within two miles of the landfill operations are numerous residences, schools, places of worship, parks, stores, medical clinics, and kūpuna housing that over 18,000 people daily live, work, and play.

The global scientific community affirms what the community of Wai‘anae moku has been living through -- especially those that live, work, and play in Nānākuli and Lualualei-- that landfills are a health hazard (See Vrijheid M., Health effects of residence near hazardous waste landfill sites: a review of epidemiologic literature. *Environ Health Perspect*, 2000; Njoku PO, Edokpayi JN, Odiyo JO, Health and Environmental Risks of Residents Living Close to a Landfill: A Case Study of Thohoyandou Landfill, Limpopo Province, South Africa. *Int J Environ Res Public Health*, 2019; Waste and Human Health: Evidence and needs, World Health Organization Nov 2015).

We ask that the Department of Planning and Permitting heed the voices of our community and support their efforts for a “clean and healthful environment.” Please do not allow PVT to relocate to TMK: (1) 8-7-009:007. We support the relocation of the PVT Landfill to an isolated area that ***should and still needs to be identified and vetted*** in the 2.7 Alternatives to the Proposed Action in the Draft EIS. Stop the **public health crisis** in Nānākuli and Mā‘ili.

Fraternally,

  
Donna Domingo *ap*  
President

csphowu

c: Mayor Kirk Caldwell  
Councilmember Kimberly Pine  
Councilmember Ron Menor

January 10, 2020

KAHEA The Hawaiian-Environmental Alliance  
Attn: Kalaniopua Young  
P.O. Box 37368  
Honolulu, HI 96837  
[kahea-alliance@hawaii.rr.com](mailto:kahea-alliance@hawaii.rr.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Kalaniopua Young:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Cultural Resources:

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describe the cultural history of the site and potential impacts to cultural resources. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources, including view planes to Hina's Cave, are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA did not find evidence of traditional cultural practices at the Project Site, including subsistence farming and gathering. Therefore, the CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

Public Health:

The Proposed Action does not pose a health risk. The facility does not accept municipal solid waste (MSW), industrial waste, regulated hazardous waste, Toxic Substances Control Act-regulated polychlorinated biphenyl (PCB) contaminated materials, radioactive waste, or infectious waste, as defined by Federal and State regulations.

The EIS includes a project-specific Air Quality Impact Report, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

The dust screen would be installed as part of initial site construction, prior to the acceptance of debris at the facility.

PVT has a remote continuous monitoring station on the PVT ISWMF administrative office trailer that records rainfall, wind speed and direction, temperature, humidity, and solar radiation. PVT closes the and ceases operations when wind speeds exceed 40 miles per hour. PVT's current SWMP does not require continuous air monitoring.

#### Buffer Zone:

PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the CCH Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

#### Underground Injection Control Line (UIC):

The UIC boundary is shown in EIS Figure 3-16. The Proposed Action is not required to be makai of the UIC line. The UIC line is determined by the State of Hawaii; PVT has no impact on this line.

EIS Section 3.4, *Water Resources* discusses potential impacts to groundwater sources. The Proposed Action is located over three aquifers, which are classified as not suitable for drinking water and not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990). The Project Site is located about three (3) miles away and down gradient from the nearest drinking water source. The landfill area will be lined and monitored to protect the underlying groundwater.

PVT has conducted groundwater quality monitoring from their monitoring wells since 1992, which demonstrate the PVT ISWMF landfill operations and controls are effective in protecting groundwater quality. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's SWMP. The Proposed Action will have no impact on groundwater quality.

EIS Section 3.3.2.5, *Sea Level Rise* discusses potential impacts of sea level rise on the Proposed Action. The Hawaii Sea Level Rise Viewer (<http://www.pacioos.hawaii.edu/shoreline/slr-hawaii>) indicates that the Proposed Action is outside the sea level rise exposure area and is not at risk of passive or high wave flooding with 3.2 feet of sea level rise (SLR-XA). It is not expected that the UIC line or the Proposed Action would be impacted by sea level rise associated with climate change.

#### Stormwater Management:

The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).

In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that future extreme storm events and the sea level rise associated with climate change will be properly managed with no impact to the environment.

The existing PVT ISWMF stormwater management system was designed with conservative assumptions and constructed in accordance with the above referenced solid waste regulations. This system has performed well during extreme storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.

#### Waste Reduction:

PVT is not responsible and has no control over the amount of waste generated by the construction industry. Project designers and engineers are motivated to divert C&D debris from landfills in order to qualify for Leadership in Energy and Environmental Design credit. PVT provides documentation of the diverted materials. Contractors are encouraged to segregate and sort materials at the job site to the extent practical. However, it is challenging to recycle at individual construction sites due to lack of space and equipment for sorting and processing.

PVT has maximized the lifespan of the existing landfill to the extent practical. Approximately 80% of the C&D debris currently received at PVT ISWMF is reused or recycled using state-of-the-art materials sorting equipment. PVT has exhausted all site planning and permitting opportunities (i.e., expanded recycling efforts, vertical expansion, horizontal expansion) to increase capacity at the PVT ISWMF.

#### Landfill Liner:

C&D landfills are only required to install a clay barrier; the proposed liner meets State requirements for Municipal Solid Waste landfills. The life expectancy of a high-density polyethylene liner in buried applications, such as solid waste landfills, is up to 300 years. The landfill liner installation would be certified by a professional engineer and meet rigorous quality assurance standards. The stormwater management system and leachate control and removal system will support geologic integrity of the Project Site. The landfill design will be subject to HDOH review and approval prior to issuing the update to the SWMP.

#### Leachate Monitoring:

EIS Section 3.4, *Water Resources* and Appendix A, *Geology, Hydrogeology, and Water Quality Report* address hydrogeology, stormwater, and water quality assessments.

Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's *Groundwater and Leachate Monitoring Plan*, which is a requirement of the facility's Solid Waste Management Permit. The *Groundwater and Leachate Monitoring Plan* specifies the number of groundwater monitoring wells, the constituents analyzed for, the data evaluation methods, and the frequency of sampling and reporting. The



existing *Groundwater and Leachate Monitoring Plan* for the PVT ISWMF would be updated to incorporate additional monitoring wells and leachate sumps that are planned as part of the Proposed Action. PVT has been sampling the groundwater monitoring wells since 1992. The monitoring data demonstrates that leachate from the existing PVT ISWMF landfill does not impact groundwater. Currently, groundwater monitoring wells are sampled semiannually, and the leachate sump is sampled annually. Reports are submitted to the HDOH semiannually. The reports are available at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. The location and contact information for the HDOH, Solid and Hazardous Waste Branch can be found at <http://health.hawaii.gov/shwb/>. The reports are not currently available online.

#### Alternative Locations:

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

#### Traffic:

The EIS discusses potential impacts to traffic in Section 4.1, *Transportation*. The Traffic Management Consultant prepared a *Traffic Impact Assessment Report* for the Proposed Action, which is included as Appendix F to the EIS. The Report indicated less than significant impact from the Proposed Action and no further traffic impact studies nor mitigation measures were warranted. PVT is permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day and up to 3,000 tons of C&D debris per day. PVT does not propose to increase these limits.

EIS Section 3.5 Air Quality discuss potential impacts to Air Quality, including emission rates for particulate matter with effective aerodynamic diameters of 10 microns (PM10) and 2.5 microns (PM2.5).

PVT would not accept Asbestos Containing Material the Relocation Site.

#### Lualualei Naval Road Access:

The PVT ISWMF site and the Project Site were originally one parcel, but the Navy, with the permission of the landowner, bisected the property into two parcels in 1931. As part of this division, the two parcels retained access rights via the Lualualei Naval Road. PVT's access right does not have an expiration date.



Agricultural Lands:

EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The Proposed Action meets the criteria for “unusual and reasonable use” of lands that are not suitable for agriculture.

Market Study:

PVT relies on the City and County of Honolulu to forecast the demand for C&D solid waste management over the 25-year planning horizon (CCH 2017, CCH 2008). In addition to Kakaako, PVT is aware of construction projects associated with military housing, the Honolulu rail project and other developments.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# KAHEA

**THE HAWAIIAN-ENVIRONMENTAL ALLIANCE**

PROTECTING

NATIVE HAWAIIAN

CUSTOMARY & TRADITIONAL

RIGHTS AND OUR FRAGILE

ENVIRONMENT

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*Mailing Address*  
P.O. Box 37368  
Honolulu, HI 96837

toll-free phone/fax  
877.585.2432

[www.KAHEA.org](http://www.KAHEA.org)  
[kahea-alliance@hawaii.rr.com](mailto:kahea-alliance@hawaii.rr.com)

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*KAHEA: the Hawaiian-Environmental Alliance is a non-profit 501(c)3 working to protect the unique natural and cultural resources of the Hawaiian islands. KAHEA translates to English as "the call."*

Karl Bromwell  
karl.bromwell@hartcrowser.com; Tel: (808) 587-7747

September 4, 2019

Mahalo for accepting our comments on the PVT EISPN on the closure of PVT Landfill and the relocation of its C&D debris receiving, recycling, and disposal operation to a parcel, owned by a PVT-affiliate, on the opposite side of Lualualei Naval Road from its current location.

KAHEA is a community-based network of nearly 10,000 kupuna, cultural practitioners, resource users, educators, and concerned residents working to protect the unique natural and cultural resources of Hawai‘I nei.

KAHEA is very concerned about the cultural and environmental impacts of the proposed PVT relocation project in Waianae due to the following reasons: increased industrial activity in the Lualualei area, the uneven distribution of toxic pollutants, and the impact of these facilities on the health and wellbeing of cultural practitioners, farmers and working-class people in the area.

We recognize the importance of establishing a new construction and demolition landfill that recycles construction and demolition waste, but siting the project at Nānākuli B is an issue of great concern to the communities who live there.

In her audit of the Department of Health’s administration of the Solid Waste Program and Assessment of Solid Waste Policies, Marion Higa points out several concerns. Additionally, in February of 2019, one of our KAHEA Board Members, Candace Fujikane, described in her letter concerns over the impact of the relocation project on the cultural significance of the “purple spot” area. The purple spot was slated to be an industrial waste zone, however, fierce opposition from the community who lives there stopped that. Today, the land is being utilized for growing healthy, organic food. The following is a list of concerns expressed by Higa, Fujikane and other informed community members regarding the PVT relocation project:

- The proposed project site is located on the ‘ili of Kaolae which stretches along the base of Pu‘u Heleakalā from the Naval Magazine down to the sea where the promontory of Pu‘u Heleakalā touches the beach. The ‘ili of Kaolae is proven in Land Commission Award documents to be the birthplace of the ho‘okala kupua (supernatural being) Māui. How will the proposed project address its location on this highly sensitive area? What is the cultural history of the project site? How is this project proposal consistent with the cultural history of this area? Protection of Hina’s Cave and the view plane to Hina’s Cave is important to the community. If the toxic dust from the landfill goes into the cave there will be no more views of the cave from street level. In the past October 2007 Cultural Impact Assessment authored by Kēhaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai‘i, emphasized the community’s concerns that these places not be cut off from

each other so that sight lines and lines of aka (energy) not be disrupted. How will Hina's Cave be protected?

- Ongoing problem in that area is the fugitive poisonous dust. People in the neighboring Coral Sands community have suffered for many years since 1992 from respiratory diseases and cancers, especially asthma, and Wai'anāe has the highest rate of asthma on O'ahu. The area selected is known to be a wind funnel from the Helekalā ridgeline. The wind whips through the area and the dust goes **over, around and through** the communities where families live. People have tried to line plastic over their windows and doors in order to keep the dust out, but the dust still invades their homes, making their lives painfully difficult. Toxicity is not just about the substance of the dust but about the ways that it affects people's health by getting into their lungs and bodies. Wai'anāe has economically depressed communities, so their health is already at-risk. The increase in dust has a greater impact on their health. How will PVT address the dust problem issuing from the? What kind of dust barriers will be used to protect nearby residential, clinics, senior homes, schools, businesses, communities and pedestrian traffic in perpetuity for long-term permanent? Will the barrier be installed prior to protection or during? Will there be a real-time meter to monitor wind speed, and will operations be suspended when wind speeds reach a certain level? Will there be ways of measuring the totality of dust generated from operations?
- Has PVT considered a green belt buffer to isolate an activity that is incompatible with residential communities? A thousand-foot green buffer belt, for example?
- PVT must prove that the project site is outside of the Underground Injection Control Line (UIC Line)? We would like to see specific maps that show us where the UIC Line is. We want evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Clean Drinking Water Act is a concern and with sea level rise, we want to know the affects PVT will have on the UIC Line? Additionally, how will PVT incorporate climate change concerns in their relocation?
- We are concerned about the catchment basin. The EISPN refers to the conditions of a 25-year rainstorm. In light of current conditions of climate change, we have to be anticipating an increase in frequency of these powerful storms. Has this project been analyzed to be safe under conditions of sea level rise?
- Please provide analysis an assessment of a program of reducing waste, particularly in the construction industry as a feasible alternative to expanding and relocating the current landfill. The draft EIS contains no analysis of the ways producers of waste and the construction industry can reduce their wastestream of materials that are ending up in Lualualei. This would extend the life of the current C&D landfill and potentially increase the sustainability of Hawai'i construction industries and other waste producers.

- PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail? What will happen to the lining after 25 or 30 years? How does the liner “exceed the requirements of State C&D regulations”? (2-5).
- How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? How will the community access these inspection reports? Will these inspection reports be available online?
- PVT needs to provide a thorough analysis of other possible sites for a C&D landfill. Nānākuli B is not the only site for such a landfill.
- PVT needs to do an updated traffic study to prove that there will be 300 trucks and whether the number is increasing. We want monitoring of older truck models and to monitor emissions. We want a 2.5 pm and 10pm particulate study conducted. We’re concerned about the dust that is kicked into the air by the truck tires. If PVT will continue to accept asbestos at the old PVT sites? Will this increase the number of trucks travelling on Lualualei Naval Access Road?
- Does PVT need a new long-term lease for access to the road from the Navy? Does PVT have proof of a fifty-year long-term easement from the Navy for the use of the Lualualei Naval Access Road?
- As a community, we propose a different solution. We want to keep that land in agriculture and we would like to see that land be used as agricultural incubator to expand food cultivation in the Agricultural District of Lualualei. Such an agricultural buffer zone would protect Hina’s Cave and other cultural sites.
- PVT must provide a market study. What is the demand for expansion beyond Kaka’ako?

What are the producers of waste and the construction industry doing to reduce their wastestream of materials that are ending up in Lualualei? We want to extend the life of the current C&D landfill.

Mahalo nui for your consideration of our concerns,

*Kalaniopua Young*

Kalaniopua Young  
Board Member of KAHEA

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January 10, 2020

O'ahu Council of the Association of Hawaiian Civic Clubs  
Attn: Mr. Benton Kealii Pang, Ph. D.  
P. O. Box 664  
Kane'ohe, HI 96744

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Benton Kealii Pang, Ph.D.:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. A qualified professional performed an assessment of the geology, hydrology, and water quality of the Project Site. This is included as Appendix A of the EIS. No ephemeral freshwater resources are located within the Project Site.
2. The EIS is an assessment of the impacts of the Proposed Action to the surrounding community. The EIS was prepared by environmental scientists and planners (See Section 8, *Preparers*). EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristic* addresses potential impacts to current and future land uses in the vicinity of the Project Site, which includes MA'O Organic Farm. The Proposed Action would be compatible with current and future land uses and is not expected to encourage or discourage changes in land use in the Waianae Region. PVT ISWMF's operations precede MA'O Organic Farm's purchase of the TMK 8-7-009-02 parcel by 20+ years.
3. The letter did not contain a comment or question 3.
4. EIS Section 5.1, *Archaeological and Historical Resources* and Appendix G, *Archeological Literature Review and Field Investigation* discusses potential impacts to historical resources including the three sites identified by Ms. Rezentes. The three historical sites are within the Project Site but outside of the development area. No potential for direct adverse impact to two of significant historic properties (SIHP # 50-80-08-6681 Concrete Bunker and SIHP # 50-80-08-6920 Rock Mound) was identified and no mitigation measures were recommended by Cultural Surveys Hawaii. A Preservation Plan was prepared and will be implemented to mitigate potential impacts to the third historic property, SIHP # 50-80-08-6699 Rock Shelter.

EIS Section 3.6, *Noise* discusses potential noise impacts and Section 3.5, *Air Quality* discusses dust impacts. Sound, noise, and dust from the Proposed Action would not negatively impact the landforms associated with Maui. EIS Section 5.4, *Scenic Resources* contains a visual impact analysis and computer renderings of the Proposed Action at maximum elevation (255 feet above mean sea level). The study assessed views of Hina's Cave (located on the slope of Puu Haleakala



at 600 feet above mean sea level) from street level and the view from Hina's Cave towards Maui Rock, which will not be impacted. The Proposed Action was designed to minimize visual impacts and to preserve views toward Hina's Cave from the surrounding area.

5. Germaine Meyers of the Neighborhood Board publicly disclosed at the August Maili-Nanakuli Neighborhood Board Meeting that her brother was an employee of PVT. PVT is not privy to information about the public offices served by their employees' family members.
6. The Project Site is not located on the ili of Kaolae. EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describe potential impacts to cultural resources. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei.
7. EIS Section 5.4, *Scenic Resources* contains a visual impact analysis and computer renderings of the Proposed Action at maximum elevation (255 feet above mean sea level). The study assessed views of Hina's Cave (located on the slope of Puu Haleakala at 600 feet above mean sea level) from street level and the view from Hina's Cave towards Maui Rock, which will not be impacted. The Proposed Action was designed to minimize visual impacts and to preserve views toward Hina's Cave from the surrounding area.
8. The EIS includes a project-specific Air Quality Impact Report, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

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- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;

- install a dust screen along the southern property boundary;
  - maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
  - install and maintain a wheel wash to clean the tires of trucks leaving the site; and
  - periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.
9. The UIC boundary is shown in EIS Figure 3-16. The Proposed Action is not required to be makai of the UIC line. The UIC line is determined by the State of Hawaii; PVT has no impact on this line.

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PVT has conducted groundwater quality monitoring from their monitoring wells since 1992, which demonstrate the PVT ISWMF landfill operations and controls are effective in protecting groundwater quality. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's Solid Waste Management Permit. The Proposed Action will have no impact on groundwater quality.

EIS Section 3.3.2.5, *Sea Level Rise* discusses potential impacts of sea level rise on the Proposed Action. The Hawaii Sea Level Rise Viewer (<http://www.pacioos.hawaii.edu/shoreline/slr-hawaii>) indicates that the Proposed Action is outside the sea level rise exposure area and is not at risk of passive or high wave flooding with 3.2 feet of sea level rise (SLR-XA). It is not expected that the UIC line or the Proposed Action would be impacted by sea level rise associated with climate change.

10. C&D landfills are only required to install a clay barrier; the proposed liner meets State requirements for Municipal Solid Waste landfills. The life expectancy of a high-density polyethylene liner in buried applications, such as solid waste landfills, is up to 300 years. The landfill liner installation would be certified by a professional engineer and meet rigorous quality assurance standards. The stormwater management system and leachate control and removal system will support geologic integrity of the Project Site. The landfill design will be subject to HDOH review and approval prior to issuing the update to the Solid Waste Management Permit.
11. EIS Section 3.4, *Water Resources* and Appendix A, *Geology, Hydrogeology, and Water Quality Report* address hydrogeology, stormwater, and water quality assessments. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's *Groundwater and Leachate Monitoring Plan*, which is a requirement of the facility's Solid Waste Management Permit. The *Groundwater and Leachate Monitoring Plan* specifies the number of groundwater monitoring wells, the constituents analyzed for, the data evaluation methods, and the frequency of sampling and reporting. The existing *Groundwater and Leachate Monitoring Plan* for the PVT

ISWMF would be updated to incorporate additional monitoring wells and leachate sumps that are planned as part of the Proposed Action. PVT has been sampling the groundwater monitoring wells since 1992. The monitoring data demonstrates that leachate from the existing PVT ISWMF landfill does not impact groundwater. Currently, groundwater monitoring wells are sampled semiannually, and the leachate sump is sampled annually. Reports are submitted to the HDOH semiannually. The reports are available at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. The location and contact information for the HDOH, Solid and Hazardous Waste Branch can be found at <http://health.hawaii.gov/shwb/>. The reports are not currently available online.

12. EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

13. Due to the declining quantities of incoming Asbestos Containing Material (ACM) for disposal, PVT anticipates that the ACM disposal area located within the Phase I area of the landfill would not reach capacity at the same time as the rest of the landfill. The ACM area would remain open until final grades within this area are achieved, at which time PVT would no longer accept ACM. No ACM disposal area is proposed for the Proposed Action.
14. PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the CCH Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.
15. The PVT would implement dust control measures to minimize fugitive dust, including but not limited to:
- pave and regularly clean permanent access and haul roads;

- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

A *Landscaping Plan* is also being prepared for the Proposed Action. PVT would plant a green belt along the western perimeter of the Project Site adjacent to Lualualei Naval Road. Landscaping will also be provided in the 750-foot buffer zone to the south. The landscaping would be installed during construction and before operations commence. The landscaping would help reduce dust generation.

PVT continues to work with the Navy to address dust generated by truck traffic on Lualualei Naval Road.

16. See item #15.
17. EIS Section 3.4, *Water Resources* and Appendix A, *Geology, Hydrogeology, and Water Quality Report* discuss potential impacts to surface and groundwater resources. The Proposed Action will comply with applicable State and Federal regulations related to water quality.
18. The existing NPDES permit for the PVT ISWMF would be updated and modified to include stormwater discharge from the Proposed Action. No new discharge points are planned.
19. See item #17 and #18.
20. Section 2.5.3.3, *Stormwater Management (site-wide)* describes the stormwater management system for the Proposed Action. Stormwater will be beneficially re-used on-site to the extent practical. The design includes Low Impact Development (LID) hydrologic design strategies and Best Management Practices to limit, convey, and retain peak stormwater flows on site.
21. The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).

In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that future extreme

storm events and the sea level rise associated with climate change will be properly managed with no impact to the environment.

The existing PVT ISWMF stormwater management system was designed with conservative assumptions and constructed in accordance with the above referenced solid waste regulations. This system has performed well during extreme storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.

22. The aquifers are classified as not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990).
23. A Landscaping Plan was prepared for the Proposed Action and is included in the Final EIS Appendix I. The landscaping will include the use of native and drought tolerant plant species that are appropriate for the area.
24. PVT does not propose to import off-island plant or soil material as part of the Proposed Action.
25. See item #23. No invasive species that may pose a risk to human or environmental health will be used.
26. There will be no nighttime work.
27. No Hawaiian hoary bats were detected during the biological surveys (Section 3.7, *Biological Resources* and Appendix E). It is only in recent years that this species is being recorded on a regular basis on Oahu. It is possible this species may use resources within the Project Site on a seasonal basis, however there are no trees suitable for roosting bats.
28. See item #12.
29. EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The site is not designated IAL and is not contiguous to agriculturally productive land. The Proposed Action meets the criteria for “unusual and reasonable use” of lands that are not suitable for agriculture.
30. See item #29.
31. See item #12 regarding the alternatives analysis.

The Proposed Action is consistent with a rural landscape. No permanent or multistory buildings are proposed. The operations would be generally shielded from public view by topography, landscaping, fencing, and berms covered in vegetation. There are few places in the greater community that currently have unobstructed views to the Project Site, due to the built environment, vegetation and topography.

In the long-term, when the Project Site reaches permitted capacity and is closed, the open space character of the Project Site would be restored. Operational facilities, equipment and office trailers would be removed. The reuse development potential would be limited to structures with shallow footing (one story). Therefore, rural open space character will be preserved for future generations.

32. The buffer zone is described in the EIS Section 2.5.2.2, *Setbacks* and 6.3.2.3, *LUO Article 5, Specific Use Development Standards*. The Final EIS Section 5.3.2.4, *PVT ISWMF Social Characteristics* summarizes the testimonial received during the EIS process. The most common complaints from neighbors are related to fugitive dust, truck traffic, speeding, and noise. The respective resources sections in the EIS addresses potential impacts and mitigation measures, if any. PVT will continue to promptly investigate and respond to complaints.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# KE ONE O KĀKŪHIHEWA

O'ahu Council of the  
Association of Hawaiian Civic Clubs

BENTON KEALII PANG, PH.D.,-HAWAIIAN CIVIC CLUB OF  
HONOLULU  
PELEKIKENA

JACOB KA'ŌMAKAOKALĀ AKI-KING KAMEHAMEHA HCC  
HOPE PELEKIKENA

GEORGIANA NAVARRO-MĀKAHA HCC  
HOPE PELEKIKENA 'ELUA

ALBERTA LOW-PEARL HARBOR HCC  
PU'UKU

ROTH PUAHALA -KING KAMEHAMEHA HCC  
PELEKIKENA IHO NEI

TERI LOO-KO'OLAUPOKO HCC  
KĀKAU 'ŌLELO

CHRISTINE "CHRISSY" ANJO-PEARL HARBOR HCC  
HOLE KĀKAU 'ŌLELO

'AHAHUI SIWILA HAWAI'I O KAPOLEI  
LANCE HOLDEN

ALI'I PAUAHI HCC  
KEHAULANI LUM

'EWA-PU'U'LOA HCC  
MARLEEN KAU'I SERRAO

HCC OF HONOLULU  
MANU BOYD

KAILUA HCC  
MAPUANA DE SILVA

KALIHI-PĀLAMA HCC  
KAIMO MUHLESTEIN

KING KAMEHAMEHA HCC  
LETANI PELTIER

KO'OLAULOHA HCC  
RANAE "TESSIE" FONOMOANA

KO'OLAUPOKO HCC  
ALICE P. HEWETT

LUALUALEI HCC  
SHIRLINE HO

MĀKAHA HCC  
LUANN LANKFORD-FABORITO

MAUNALUA HCC  
ROSE KITTY SIMONDS

NA LANI 'EHA HCC  
R. KELANI RAMOS

NĀNĀIKAPONO HCC  
JAYCINE HICKS

PAPAKŌLE'A HCC  
KEALI'I LUM

PEARL HARBOR HCC  
KU'UMEALOHA GOMES

PRINCE KŪHIŌ HCC  
A. MAKANA PARIS

PRINCESS KAI'ULANI HCC  
RUSTY RODENHURST

QUEEN EMMA HCC  
RAWLETTE P. KRAUT

HCC OF WĀHIAWA  
MARIE "MĀLIA" DOO

HCC OF WAIALUA  
MAKALAPUA CASSON-FISHER

WAI'ANAE HCC  
CYNTHIA ENRIQUEZ

WAIKIKI HCC  
L. PI'IKEA TOMCZYK

HCC OF WAIMĀNALO  
KALANI KALIMA

FRANZ KRAINTZ, AICP

CITY AND COUNTY OF HONOLULU

DEPARTMENT OF PLANNING AND PERMITTING, PLANNING  
DIVISION

## **OPPOSITION** FOR PVT INTEGRATED SOLID WASTE MANAGEMENT FACILITY (ISWMF) RELOCATION SEPTEMBER 5, 2019

### **Via E-mail**

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP,

As Pelekikena (President) of Ke One O Kākūhihewa (O'ahu Council- Association of Hawaiian Civic Clubs) and its 25 Hawaiian Civic Clubs, we oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli. The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

We respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Attached is our resolution titled: **Urging the State of Hawai'i and Counties to Create a Four-Mile Buffer Zone Around Landfills**. It was passed at our council meeting on August 24, 2019.

Additional comments to the DEIS are below:

1. Kukui Maunakea Forth mentioned ephemeral pools and streams, upland streams feeding lo'i kalo near Ulehawa Stream and pōhaku. She also identified wahi pana including Pu'u Heleakala and Ka Olāe. There was a recommendation to "survey for the ephemeral freshwater resources within and near the project area." Has that survey been completed?
2. The CIA also requested "an environmental scientist or similar qualified professional provide an assessment of the impacts of the proposed action to the surrounding environment and community. Such an assessment will address concerns for potential impacts to future agricultural activity occurring north of the project area." Has anything been done to mitigate Maunakea-Forth's concerns and impacts to her farm?



4. Cynthia Rezentes identified 3 historic sites. Has anything been done to further identify and mitigate these sites? What has been done to reduce sound, noise, dust and visual planes from Pu'u Heleakala, Pu'u o Hulu Kai, Pu'u o Hulu Uka, Makalualualei, Ulehawa and landforms associated with Maui?
5. Has PVT ever employed family members of the neighborhood board since 2010?
6. The proposed project site is located on the 'ili of Kaolae which stretches along the base of Pu'u Heleakala from the Naval Magazine down to the sea where the promontory of Pu'u Heleakala touches the beach. The 'ili of Kaolae is proven in Land Commission Award documents to be the birthplace of the ho'okala kupua (supernatural being) Maui. How will the proposed project address its location on this highly sensitive area?
7. Protection of Hina's Cave and the view plane to Hina's Cave is a concern. In the past October 2007 Cultural Impact Assessment authored by Kehaulani Souza Kupihea and Hallet Hammat of Cultural Surveys Hawai'i, they emphasized that the community was adamant that Hina's Cave be protected. How will the proposed project not obstruct view places to Hina's Cave from the street level?
8. Residents of the neighboring Coral Sands community have suffered since 1992 from respiratory diseases and cancers, especially asthma, and Wai'anae has the highest rate of asthma on O'ahu. How will nearby residences, schools, farms, and businesses be protected? How will the project measure the totality of dust generated from operations? Have independent asthma studies been conducted on nearby residents?
9. PVT must prove that the project site is outside of the Underground Injection Control Line (UIC). Is there any evidence that the project will not contaminate the waters protected by the UIC Line. Is there any water source under that site? Will sea level rise affect the UIC Line and thus the project?
10. PVT has described a liner for the landfill. Does the liner used for the landfill come with a guarantee that the liner will not fail? What will happen to the lining after 25 or 30 years? How does the liner "exceed the requirements of State Construction and Demolition (C&D) regulations"
11. How will the leachate be tested and regulated by the Department of Health? How will communities be informed about these leachate inspections? How will the community access these inspection reports? Will these inspection reports be available online?
12. PVT did not provide a thorough enough analysis of other possible sites for a C&D landfill. Nanakuli B is not the only site for such a landfill.
13. Will PVT continue to accept asbestos at the old PVT site?
14. Has PVT considered a green belt buffer and firebreak to isolate an activity that is incompatible with residential communities? A one thousand-foot green buffer belt and firebreak, for example?
15. The project has the potential to generate fugitive dust. You must control all fugitive dust. Note that construction activities that occur near to existing residences, business, public areas and major thoroughfares exacerbate potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that may generate fugitive dust. 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 problems.

16. You should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:
- Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic 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 dust from shoulders and access roads;
  - Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
  - Controlling dust from debris being hauled away from the project site.
17. Any project and its potential impacts to State waters must meet the following criteria:
- Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
18. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including stormwater runoff, into State surface waters (HAR, Chapter 11-55).
19. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401, WQC are required, must comply with the State's Water Quality Standards.
20. State requires all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
- a. Treat stormwater as a resource to be protected by integrating it into project planning and permitting. Stormwater has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that stormwater recharges groundwater supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, stormwater cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize stormwater as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.
  - b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
  - c. Consider stormwater best management practice approaches that minimize the use of potable water for irrigation through stormwater storage and reuse, percolate stormwater to recharge groundwater to revitalize natural hydrology and treat stormwater which is to be discharged.
  - d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
  - e. Identify opportunities for retrofitting or bio-engineering existing stormwater infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.
  - f. An analysis should be made of the hydrogeology and related groundwater quality to ensure that the proposed liner design will be protective of the underlying resource.
21. Preventing run off from the project sites seems to be addressed by a storm water management system. However, has climate change scenarios, such as an increase in floods, been considered by your storm water management plan? If so, how?



22. The EIS states that the three aquifers are not ecologically important. What does the EIS base this claim on?
23. We recommend using native Hawaiian plant species for landscaping that are appropriate for the area (i.e. climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. We recommend consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project
24. We recommend against importing any off- island plant or soil material. Soil and plant material may have fungi (e.g. Rapid 'Ōhi'a Death) and other pathogens that could harm our native species and ecosystems. We recommend consulting the Hawai'i Interagency Biosecurity Plan at <http://dlnr.hawaii.gov/hisc/plans/hibp/> in planning, design, and construction of the project.
25. To identify invasive species risks, a Hazard Analysis Critical Control Point Plan (HACCP) should be developed for all construction activities.
26. We note that artificial lighting can adversely impact seabirds that may pass through the area at night by causing disorientation. This disorientation can result in collision with manmade artifacts or grounding of birds. For nighttime lighting that might be required, all lights should be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea.
27. The State listed Hawaiian Hoary Bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the project area and may roost in nearby trees. If any site clearing is required this should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). If this cannot be avoided, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed without consulting with the Division of Forestry and Wildlife (DOFAW). Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight.
28. Hawai'i Administrative Rules (HAR) 11-200-17(f) requires that alternatives be considered in an Environmental Impact Statement (EIS) regardless of cost. PVT only provides "postpone" and "no action" alternatives to the subject parcel location as the DEIS states that the subject parcel is the only land parcel available to PVT. Failing to explore other locations as presented in the DEIS leads readers to believe that the only feasible alternative is the proposed action. Essentially, the proposed action in the EISPN has become the preferred and only alternative; thus, creating a potential bias favoring the proposed action that could set the EIS process up for a predetermined outcome before environmental review even begins. Considering that this is the only Construction and Demolition (C&D) waste facility available to City and County of Honolulu (CCH), the proposed action appears forced upon the CCH with no other viable options to consider. As HAR 11-200- 17(f) requires alternatives to be considered regardless of cost, PVT should explore parcel acquisitions or leasing in different locations.
29. We note that the current C&D facility takes up 200 acres of agricultural zoned land in the Wai'anae district. Relocation to the adjacent subject parcel would mean a total of 379 acres of agricultural zoned land would be consumed by landfill materials and associated landfill operations.
30. Considering the current PVT C&D parcel is adjacent to what is considered "important agricultural lands", the agricultural potential of the PVT property can never be fully realized. Limiting any agricultural lands by permanently packing them with landfill waste materials is arguably questionable for an island environment and something the CCH should rethink in terms of sustainability.
31. Some members of the local Nānākuli community, comprised of many Native Hawaiians, have consistently argued about the traffic, dust, and view-plane obstruction created by the current C&D operations and expressed concern over the expansion of the current facility that occurred just a few years ago. Utilization of such a large open space for a landfill also goes against policies within the March 2012 Wai'anae Sustainable Communities Plan (SCP) designed to protect large open spaces. Subsistence choices and quality of life become limited for the Nanakuli community with diminishing agricultural lands and expanding landfills in their backyard. We recommend in fairness that an alternative site seriously be considered as part of the EIS process as the Nanakuli community has brunt the burden of C&D waste coming primarily from more easterly urban parts of O'ahu for many years.

32. The draft EIS should describe the same buffer zone for the existing site, describe any complaints received from neighbors, and explain how those complaints were addressed.

Ke One O Kakūhihewa is a native Hawaiian council made up of 25 civic clubs on the island of O'ahu. Our oldest member, Hawaiian Civic Club of Honolulu was established by Prince Jonah Kūhiō Kalaniana'ole on December 7, 1918.

Sincerely,

A handwritten signature in black ink, appearing to read "Benton Kealii Pang".

Benton Kealii Pang, Ph.D.



**KE ONE O KĀKUHIEWA, O‘AHU COUNCIL OF THE  
ASSOCIATION OF HAWAIIAN CIVIC CLUBS**

**RESOLUTION NO. 19- 4**

**URGING THE STATE OF HAWAI‘I AND COUNTIES TO CREATE A FOUR-MILE  
BUFFER ZONE AROUND LANDFILLS**

WHEREAS, there is an emergence of scientific studies affirming the health hazards of living and working near landfills (Waste and Human Health – World Health Organization, Nov 2015; *Living near a landfill may damage your health*, International Journal of Epidemiology, Oxford University Press, 2016); and

WHEREAS, the State of Hawai‘i and its counties lack landfill buffer zone requirements that adequately protect public health; and

WHEREAS, adequate landfill buffer zones provide minimum space of four (4) miles and improvements, particularly trees and other vegetation, between a landfill’s structures used for handling or storing waste and homes, schools, and other public places; and

WHEREAS, hundreds of residents of Nānākuli Town and the Nānākuli Hawaiian Homestead, thousands of students attending Ka Wai Hona Public Charter School, Nānāikapono Elementary School, Nānākuli Elementary School, Nānākuli High and Intermediate School, Kamehameha Schools Community Learning Center, and thousands of members of the public go to places of worship, clinics, grocery stores, restaurants, and visit their ‘ohana at the Nānākuli *kupuna* housing, all within four (4) miles of Oahu’s only construction and demolition landfill, the privately-owned landfill operated by PVT Land Company, Ltd. (PVT Landfill); and

WHEREAS, the current buffer zone between PVT Landfill and its nearest residential units and churches is approximately 750 feet; and

WHEREAS, from the 1980s, *kama ‘āina* offered numerous oral and written testimony at Neighborhood Board meetings, Department of Health public hearings, and community gatherings at churches voicing concerns over the adverse health impacts of living and working in close proximity to landfills in general and PVT Landfill, in specific; and

WHEREAS, the State Department of Health has still not addressed the outstanding inquiries from the community related to the long-term health effects of the debris that runs off of PVT Landfill during heavy rains, the leachate that permeates the ground, the dust particles from both PVT Landfill and its trucks that coat neighborhood houses as they drive through the community, and the gasses released by the decomposition of waste and other landfill activities, especially the cumulative and long-term health effects on those living and working within four (4) miles of landfill; and

WHEREAS, the predominantly Native Hawaiian communities of Nānākuli Town and Nānākuli Hawaiian Homestead should no longer be subject to the adverse effects of landfills; and

WHEREAS, no community in the State of Hawai‘i should be impacted by the adverse effects of landfills; and

NOW, THEREFORE, BE IT RESOLVED, by Ke One O Kākuhihewa, O‘ahu Council of the Association of Hawaiian Civic Clubs at its Special Meeting at Kapālama, O‘ahu, in the malama of Mahoe Mua and the rising of Kōloakūkahi this 24th day of August 2019, urge the State of Hawai‘i and City and County of Honolulu to create a four-mile buffer zone around landfills.

INTRODUCED BY: Nānāikapono Hawaiian Civic Club and Prince Kūhiō Hawaiian Civic Club

ACTION:                      Adopted

January 10, 2020

MA'O Organic Farms  
P.O. Box 441  
Waianae, Hawai'i 96792  
Attn: J. Kukui Maunakea-Forth, Executive Director

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear J. Kukui Maunakea-Forth:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Water:

- EIS Section 2.5.3.3, *Stormwater Management* describes how the Proposed Action will allow the groundwater and underlying aquifers to recharge. Less than 10% of the site would be covered with impervious surfaces. The stormwater system would collect stormwater runoff from the Project Site and the adjacent slopes of Puu Heleakala and divert it away from on-site operations and the neighboring properties. Stormwater runoff would flow over land into earthen drainage channels located around the perimeter of the Project Site. The channels would convey the stormwater into stormwater basins located in the southern portion of the Project Site (see EIS Figures 2-3, 2-9). In addition to stormwater basins, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion.
- The Project Site is mostly dry shrubland (i.e., grassland invaded by several species of shrubs). With the Proposed Action, less than 10% of the site would be covered with impervious surfaces. Unused areas of the landfill area will be seeded with Buffelgrass and Guinea. The water used for dust control results in transeaporation, which reduces heat in the area.
- PVT has conducted groundwater quality monitoring from their monitoring wells (Figure 3-16) since 1992, which demonstrate the PVT ISWMF landfill operations and controls are effective in protecting groundwater quality. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's Solid Waste Management Permit. There is always at least one monitoring well located upgradient from and unaffected by the landfill operations to compare to downgradient water quality. MA'O Organic Farms' operations are upgradient of PVT's operations. Further information on water resources can be found in EIS Section 3.4, *Water Resources*.
- Potable water use for the Proposed Action would be minimal, similar to that of PVT ISWMF, which uses approximately 65,000 gallons per day. PVT plans on generating their



own potable water onsite from non-potable water using reverse osmosis. Non-potable water would be withdrawn from two existing wells on the Project Site PW-1 (Well 2308-03) and North Well (Well 2408-11). Water usage from the wells is permitted up to a maximum of 288,000 gallons per day (gpd) per well, and usage is documented with meters installed on the output of the wells (Department of Land and Natural Resources [DLNR] Well No: 2308-03 and Well No: 2408-11). The aquifers' sustainable yields and pumpage were considered in issuing the permits. PVT does not propose to increase the permitted usage. Current water usage is approximately 100,000 GPD. Operational controls to minimize water use would include vegetation or use of soil cement on unused portions of the landfill to reduce dust and paving of permanent internal roads and work areas (i.e., portions of the materials recovery areas).

- We'd like to offer a clarification on the PVT staff using "bottled water for drinking" language noted in section 2.5.6.2. The staff fills their personal, reusable water bottles from larger 3-5 gallon water jugs located in communal areas (offices, trailers) on the property.
- The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)). In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that future extreme storm events and the sea level rise associated with climate change will be properly managed with no impact to the environment. The existing PVT ISWMF stormwater management system was designed with conservative assumptions and constructed in accordance with the above referenced solid waste regulations. This system has performed well during extreme storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.

#### Existing Conditions

- Reference to MA'O Organic Farms will be corrected throughout the Final EIS document.
- Figure 1-1, Figure 6-1 and Figure 6-2 have been corrected to accurately show that the area identified as Tropic Land, LLC is now owned by MA'O Organic Farms.
- We note that MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and developing the parcel into a working farm and affordable, farm-worker housing project. These detailed were added to the Final EIS Table 5-10: Planned Land Use Changes (Edits shown in red underlined text):

8	<u>MAO Farms</u> MA'O Organic Farms representatives presented plans to expand their farming operations to the former Tropic Lands, LLC parcel (TMK: 8-7-009:002). <sup>7,8</sup> <u>MA'O Organic Farms is in the process of re-zoning TMK 8-7-009-02 to Ag-2 and plans to develop the parcel into a working farm and affordable, farm-worker housing project.</u>	Agriculture	Land acquired.	<u>MAO Farms</u> MA'O Organic Farms
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- A more detailed description of MA'O Organic Farm's activities is included in the Final EIS, Section 4.6.2:

MA'O Organic Farms is located within ¼ mile of the Project Site. MA'O Organic Farms operates an organic farm that supplies fresh produce to Oahu and the Waianae/Nanakuli Community and serves hundreds of school-aged and post-secondary youth through their internship and Farm 2 Fork programs.

#### Air and Water Quality

- EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristic* addresses potential impacts to current and future land uses in the vicinity of the Project Site, which includes MA'O Organic Farm. The Proposed Action would be compatible with current and future land uses and is not expected to encourage or discourage changes in land use in the Waianae Region. PVT ISWMF's operations precede MA'O Organic Farm's purchase of the TMK 8-7-009-02 parcel by 20+ years.
- The Proposed Action is not an industrial activity. EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The Proposed Action meets the criteria for "unusual and reasonable use" of lands that are not suitable for agriculture.
- The EIS includes a project-specific Air Quality Impact Report, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.
- PVT would implement dust control measures to minimize fugitive dust, including but not limited to:
  - pave and regularly clean permanent access and haul roads;
  - apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
  - apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
  - landscape closed portions of the landfill area;
  - apply soil cement to unused portions of the landfill area;
  - maintain a 750-foot buffer zone along the southern property boundary;
  - install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

The Proposed Action would not produce significant exhaust emissions (EIS Section 3.5, *Air Quality*).

#### Land Use Policies and Controls:

- The No Action Alternative does not assume that there are no other viable uses of the Project Site. The No Action Alternative is retained in the environmental impact analysis as a baseline for existing conditions.
- EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The Proposed Action meets the criteria for "unusual and reasonable use" of lands that are not suitable for agriculture.
- The Proposed Action is an allowable use of AG-2 lands with a Conditional Use Permit Major.

#### Among our other concerns

- EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describe potential impacts to cultural resources. The CIA complies with Hawaii's environmental review process (HRS Ch. 343) which requires consideration of the Proposed Action's effect on cultural beliefs, practices, and resources, including traditional cultural properties. The CIA was conducted in accordance with the Office of Environmental Quality Control (OEQC) Guidelines for Assessing Cultural Impacts. Additionally, Section 5.1.2.4, *Archaeological Research* summarizes 23 archaeological studies previously completed in the vicinity of the Project Site (see Table 5-1). The locations of these studies are shown in Figure 5-1. Four of the studies included the Project Site. The Proposed Action is not anticipated to impact cultural or historical resources.
- EIS Section 2.4.5, *Closure of PVT ISWMF C&D Landfill* includes details about the closure process. PVT's *Closure Plan* is a requirement of their Solid Waste Management Permit. PVT's Solid Waste Management Permit is available on the Hawaii Department of Health website - <http://health.hawaii.gov/shwb/solid-waste-pvt-permit/>. Monitoring and reporting are part of the Post-Closure Plan approved by the Hawaii Department of Health. PVT has not formed a plan for use of the site post-closure.
- At the end of their useful life, de-commissioning of the solar arrays would comply with State and Federal regulations.
- The Proposed Action does not include development on TMK 8-7-009:001.
- Additional information is included in EIS Section 2.5.5, *Proposed Renewable Energy Production*. In sum, feedstock for the Gasification Unit would be generated on-site from the MRD process lines. A fuel crop/feedstock mixture would be required for the Anaerobic Digestion System. Feedstock would be generated on site from the MRD

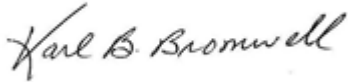
process lines and fuel crops sources from local farms. Arrangements to source fuel crops would not be finalized until all land use permits are obtained.

- Fire Protection measures are described in EIS Section 2.5.6.5, *Fire Protection*. There would be no increased fire risk to the nearby community.
- PVT is not responsible and has no control over the amount of waste generated by the construction industry. Project designers and engineers are motivated to divert C&D debris from landfills in order to qualify for Leadership in Energy and Environmental Design credit. PVT provides documentation of the diverted materials. Contractors are encouraged to segregate and sort materials at the job site to the extent practical. However, it is challenging to recycle at individual construction sites due to lack of space and equipment for sorting and processing. PVT has maximized the lifespan of the existing landfill to the extent practical. Approximately 80% of the C&D debris currently received at PVT ISWMF is reused or recycled using state-of-the-art materials sorting equipment. PVT has exhausted all site planning and permitting opportunities (i.e., expanded recycling efforts, vertical expansion, horizontal expansion) to increase capacity at the PVT ISWMF.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



# MA'O ORGANIC FARMS

*an 'āina-based project of the Wai'anae Community Re-development Corporation*

P.O BOX 441 • WAI'ANAE HI 96792 • TEL/FAX 808.696.5569 • SALES ORDERS 696-FARM  
WEBSITE: [www.maoorganicfarms.org](http://www.maoorganicfarms.org) • TWITTER: [maoorganicfarms](https://twitter.com/maoorganicfarms) • E-MAIL: [info@maoorganicfarms.org](mailto:info@maoorganicfarms.org)

September 5, 2019

TO: PVT Land Company  
c/o Karl Bromwell, Hart Crowser  
7 Waterfront Plaza  
500 Ala Moana Blvd.  
Suite 7-240  
Honolulu, HI 96813

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement

CC: Mayor Kirk Caldwell  
Councilmember Kymberly Marcos Pine  
Councilmember Ron Menor  
Senator Maile Shimabukuro  
Representative Staycelynn Eli  
Franz Krintz, AICP, Dept. Of Planning and Permitting

Dear Mr. Bromwell:

For 18-years, the Wai'anae Community Re-Development Corporation (WCRC), a federally recognized 501(c)(3) nonprofit organization better known as MA'O Organic Farms, has worked to address the challenges of our Wai'anae coast youth and community. Our impact strategy focuses on five critical areas of need:

- Under-privileged Leeward Coast youth
- Sustainable economic development
- Organic agriculture
- Health & well-being
- Hawaiian culture

We train youth to be culturally rooted, communally relevant social entrepreneurs and leaders primarily through 'āina-based paid internships on our farm in Lualualei Valley. Approximately 140 youth come through our college and high school internships each year and we are growing that program four-fold to serve more youth and families in our community. We are also the largest certified organic farm on O'ahu – producing and distributing 200,000 lbs of organic produce at retailers and restaurants across the island this year.

To support our organizational growth, in the last 12-months, WCRC/MA'O has expanded from our 24 acre operation on Puhawai Rd in Lualualei Valley onto two additional parcels totalling 257-acres located along Lualualei Naval Road.

- TMK 8-7-009-2 236.15-acres – acquisition concluded in April 2019.
- TMK 8-7-010-6 21.14-acres leased by WCRC/MA'O from the Trust for Public Land since 2018. Work is underway to convey the 21-acre parcel to MA'O via the Hawai'i Legacy Land Conservation Program.

Our first plantings on the 21-acre parcel went in this summer, they included 'ulu (breadfruit), citrus, kalo (taro) and 'uala (sweet potato). We will plant more fruit trees and start a native plant reforestation project on the 236-acre parcel in a couple months. Over the next few years, these two parcels will be in full production, yielding over one million pounds of organic fruits and vegetables per year for local consumption. This work is being led by our dedicated team which is made up of mostly young farm managers, farm apprentices, and our Youth Leadership Training interns who range from 17-24 years old.

The proposed project site for PVT's *Integrated Solid Waste Management Facility (ISWMF) Relocation* is less than 1,300 feet away from the southern edge of our 236-acre parcel. With such close proximity to the the proposed PVT project, it is urgent that we provide comments related to the PVT ISWMF Draft Environmental Impact Statement dated July 11, 2019. We relay these critical and relevant concerns about the Project in the hopes that they will be given due consideration and that they will be addressed immediately.

#### Water

- We are extremely concerned about the cumulative impacts that the near total coverage of the 179-acre parcel with impervious surfaces will have on the ability for the groundwater and underlying aquifers to recharge.
- Further, we are concerned about the surface heat produced by the ISWMF operations, including the planned burning of feedstock, as well as the heat-gain from compacted and treeless surfaces throughout the 179-acre site. This heat gain has a negative effect on Lualualei Valley's ability to pull and retain rain from the mauka areas to all parts of our community.
- The planned use of existing wells on the proposed site, and the "future wells" mentioned throughout the DEIS could result in cross-contamination of the seven wells on MA'O's neighboring parcel and also result in contamination of the underlying aquifer. We do not see a plan for monitoring this. We are concerned about both the cumulative impact and secondary indirect effects of PVT's intense proposed useage of wells for its great water needs on MA'O's ability to derive safe and adequate water from our exisintg wells for our own agricultural and fire-suppression needs.
- How do we know PVT's water needs are not going to increase significantly from what is projected in the DEIS? And what is the plan to ensure fair allocation of BOWS water in the event that the projected needs increase?
- We condemn the plan for PVT Staff to use "bottled water for drinking" described in Sec. 2.5.6.2. Single-use plastics and bottled water contribute to our waste-stream, have not proven to be easily recycled, and carry an outsized carbon-footprint.
- Surface and Stormwater managment efforts described throughout the DEIS are based on a 25-year 24-hour rain event (e.g., Sec 3.3.3.1 and Sec 3.4.2.1). However, in the last few years, Hawai'i has had several rain events more intense than this. We would like to see more forward-looking management efforts that take into account the current and likely future intensity of rains due to climate-change and warming sea-levels.

### Existing Conditions

- Overall and throughout the DEIS, our organization is not quite accurately characterized:
  - The formal name of our organization is the Wai'anae Community Re-Development Corporation, DBA MA'O Organic Farms. MA'O is an acronym that stands for Mala 'Ai 'Ōpio – translated as the youth food garden. When we are referred to as MA'O, all three letters should be capitalized.
  - Tropic Land LLC is no longer the owner of TMK 8-7-009-2. Unless specifically discussing Tropic Land LLC's work, its name should be removed from all references as a neighboring entity, including maps and drawings of the area.
  - We are currently in the zone-change process to re-zone TMK 8-7-009-2 to Ag-2.
  - MA'O is starting to return its land on TMK 8-7-009-2 to a working farm that will produce certified organic fruits, vegetables and leafy greens for the O'ahu market. We employ and train youth from this community and are actively growing our youth program. Within the next eight years, we expect to have 400 youth participating in internships each year and many of them will be actively learning and working on TMK 8-7-009-2.
  - We also plan to develop an affordable, farm-worker housing project on TMK 8-7-009-2 within the next 5-7 years. This housing plan has been discussed at both Wai'anae and Nānākuli neighborhood board meetings. It is factored in as part of the master plan we are currently developing for our land.
  - The youth involvement and housing project on TMK 8-7-009-2 are two beneficial uses of the surrounding areas that stand to be adversely impacted by PVT's proposed ISWMF relocation.
- (Sec. 4.6.2) MA'O is listed but not fully described as other community assets are. We would like to see MA'O described here as located within ¼-mile of project site, operating an organic farm that supplies fresh produce to thousands on O'ahu and in the immediate Wai'anae/Nānākuli community, and serving hundreds of school-aged and post-secondary youth through our internship and Farm 2 Fork programs. PVT's ISWMF relocation project may negatively impact MA'O's ability to serve its community, as outlined through many of the points relayed in this letter.

### Air and Water Quality

- The adverse effects of dust air and water pollutants will impact the quality of fresh produce we grow and pose a risk for food safety. Moreover, exhaust, excess heat and fugitive dust can cause lower production of produce, and lower the quality of the produce we grow, especially our salad and leafy greens, which make up over 50% of our sales. This would have a direct adverse effect on our organization's earned revenues, which we project to reach over \$10 Million annually by 2027. It will have an adverse affect on our ability to matriculate youth through our leadership programs, on the health of our youth interns and staff, and on ability to meet O'ahu's need for locally grown food.
- The critique by Aunty Alice Greenwood, founder of the Concerned Elders of Wai'anae (recently deceased), of a once-planned light industrial park just up the road from PVT's proposed ISWMF relocation site resonates in this instance, too:

*"The few noxious commercial activities allowed on properties abutting Lualualei Naval Road have, over the short-term, compromised the quality of life for residents along Farrington Highway and on Hakimo Rd. Despite*



*this, many residents continue to perpetuate their farming traditions, growing food and raising animals on their agricultural plots. The addition of one more “urban-like” usage next to working agricultural farms and residential communities without address the reduction, elimination or prevention of serious public health issues is immoral. Allowing this industrial park to be established in the middle of this longstanding rural residential and agricultural community will further compromise the public health for citizens in the Lualualei ahupuaa.”*

- We also know from census and other data that Nānākuli Homestead and the neighborhoods of Auyoung Homestead Road and Mōhihi Street near PVT’s existing ISWMF site have the 2nd and 3rd lowest life expectancies in the State - eight to 10 years less than the State average of 82 years. How does the project strive for a reduction in residents’ exposure to air pollution from dust, exhaust emissions, and other activities on the proposed ISWMF relocation site? How does the project proactively work to improve the health of its immediately neighboring residents?

#### Land Use Policies and Controls

- The No Action Alternative (Sec. 4.2.3.2), in stating that the “project site would remain undeveloped,” assumes no alternative viable land-uses or value to the land. However, we strongly believe that there is great value and potential at the “undeveloped” site for:
  - 
  - Agricultural production
  - Housing for agricultural workers – permitted under Ag-2 zoning
  - Carbon capture
  - Groundwater and aquifer recharge
  - Re-creation of native forest and wildlife habitat
  - Cooling effect of brush and trees
- We oppose PVT’s intent to secure a Special Use Permit in order to establish a C&D debris management operation on State and CCH Agricultural zoned lands. We believe the project contributes to encroachment pressures on important agricultural production and is akin to a typical case of “spot” zoning wherein agricultural lands are acquired for purposes other than farming. This proposed ISWMF relocation will endanger the resurgent agricultural character of Wai‘anae/Nānākuli, is a key threat to the viability of diversified agriculture, and contrary to the State Constitution’s aim to conserve and protect agricultural land through its designated agricultural districts. The lack of long-term availability of farm land is cited as a primary obstacle to increasing local food production, a problem that would be compounded by shifting this agricultural land to a non-productive use, as proposed by PVT.
- Using this site for its intended agricultural purpose would better reflect the policies and stated priorities of both the State and City and County of Honolulu. Governor Ige has identified the doubling of local food production as an urgent need and a priority for his administration:

*“Agriculture is critical to self-sufficiency and food security. Instead of continuing to import 90% of our food, we need to take steps to produce*

*more food locally. The Administration is committed to making farming and local food production a thriving industry.”<sup>1</sup>*

- The growing urgency to increase local food production stems partly from experts’ understanding of the impacts of global climate change on Hawai‘i, a remote community with a vulnerable food system largely dependent on imports. According to Josh Stanbro, City and County of Honolulu’s Chief Resilience Officer, “Food security is one of the biggest challenges of climate change. Increasingly, we’re seeing drought and extreme weather conditions hampering big global food production.”<sup>2</sup> Upholding the parameters for allowable uses on this AG-2 zoned site, and restoring it to agricultural production would not only contribute to increasing local production and building the community’s resiliency, it would also get our community closer to the related goals of increased carbon sequestration, groundwater and aquifer recharge, erosion prevention, and fire prevention.
- Due to MA‘O’s work, and the work of several other schools and non-profits in Wai‘anae/Nānākuli, there are hundreds of young people in this community who are skilled and experienced in farming at a commercial scale. We must preserve prime and large tracts of agricultural lands on the Leeward Coast so that these young people can stay in this community to carry on this work that is critical to our State. The combination of prime agricultural land *AND* young people in proximity who are skilled enough to farm it is a trait unique to Wai‘anae’s community that is not rivaled by any other alternative site. It is what makes the proposed site *expressly* suitable for agriculture as a driver of regenerative economic activity for the Leeward Coast.
- Using this site for agricultural housing, as permitted under Ag-2 zoning, and envisioned on MA‘O’s TMK 8-7-009-2, would simultaneously help to address Hawai‘i’s housing crisis and further bolster the health of a robust agricultural community and economy in Wai‘anae/Nānākuli. Hawai‘i’s housing crisis has been analyzed and documented for decades by academics, policy makers, and activists. The conclusion of Hawai‘i Appleseed Center for Law and Economic Justice’s 2014 *Hawai‘i’s Affordable Housing Crisis* policy report is representative of these assessments:

*“Hawai‘i has been struggling with affordable housing for years, and this challenge shows no signs of abating. Homeownership is a distant goal for many in our community, and minimal affordable rental housing is being built. Our rising land prices, high construction and development costs, and growing population are all driving up the costs of market housing. In the meantime, many of our residents struggle to pay for shelter and must make tradeoffs between housing and other necessities, double-up with another household, and at worst, risk homelessness. [...] Our growing shortfall of affordable housing inventory hurts families and our economy. As this report demonstrates, we are at a critical juncture on housing and homelessness and must resolve to meet the need for affordable housing.*

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<sup>1</sup> <https://governor.hawaii.gov/action-plan/agriculture>

<sup>2</sup> *Star-Advertiser*, Important map of ag lands is forwarded to City Council. 11/17/18

*The future of our workers, families, children, and community depends on it.*<sup>3</sup>

A housing project that conforms to the Agricultural Cluster Housing standards described in Section 21-3.50-1 of the City and County of Honolulu's Land Use Ordinance would help to address this crisis, and maintain a strong agricultural economic base within our community by dedicating a fraction of this site to housing that is affordable, in close proximity to working agricultural lands, and is aimed at building the assets of food systems workers. The Agricultural Cluster housing development model would ensure a balance between maintaining large contiguous tracts of land for growing food alongside housing development that hews towards affordability through its modest density, contributing to community well-being on multiple fronts.

#### Among our other concerns

- Cultural Sites. We would like a more intensive review and consideration of this plan with regard to the significant cultural and historical sites in the area. The breadth and depth and inter-connectedness of relevant cultural sites have not been fully researched and deserves a more focused study. The following are excellent sources to inform further discovery:
  - *Cultural Impact Assessment of 179 Acres for the Proposed Nānākuli B Composting and Solid Waste Landfill Facility* (Souza and Hammatt)
  - Comparative assessment of the 156-page *Cultural Impact Assessment* by Souza and Hammatt with the 10-page *Cultural Impact Assessment - Final Report for the Nanakuli Community Baseyard*, prepared by Janelle L. Kaohu, Angelita S. Aipoalani and Hanalei Y. Aipoalani.
  - "Of Mo'ō and Māui: Mo'ō'āina as Cartographic Method" From Candace Fujikane, *Mapping Abundance for a Planetary Future: Kanaka Maoli and Critical Settler Cartographies in Hawai'i* (Durham: Duke University Press, forthcoming in 2020).
- Closure of the Existing ISWMF Site. We would like to review a comprehensive and detailed closure plan for the existing ISWMF site. Specifically, what is the final layer or capping made out of? What is the long-term plan for the site? Will a public park with greenery and trees be possible on the site? What other future adaptive re-uses have been contemplated for the current site and discussed with Department of Health, Department of Planning and Permitting, City Council and the Mayor's Office? What are the uses that may never be possible on the existing site? How will on-going monitoring of the site be done? Who will be responsible for this monitoring and reporting results to the community?
- Plan For De-Commissioning The Solar Arrays. We would also like to understand the decommissioning plan of the solar/PV array(s) planned for the proposed ISWMF relocation.
- Buffer Zones. TMK 8-7-009-001 is 219 acres of Ag-2 and P1 zoned land owned by Leeward Land Co./PVT. It is the only buffer between MA'O and the ISWMF relocation site. We estimate that approximately 20 acres of this TMK is currently zoned AG-2 and

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<sup>3</sup> Hawai'i's Affordable Housing Crisis. Hawai'i Appressed Center for Law and Justice Policy Report. 2014.  
<http://hiappleseed.org/wp-content/uploads/2016/11/Hawai'i's-Affordable-Housing-Crisis.pdf>

is comprised of relatively level, prime soils with adequate drainage. The rest is zoned P1 with upland areas that are extremely promising for replanting and reforestation in a manner that would recreate habitat for native species, increase natural groundwater recharge and act as natural fire protection. This parcel also includes direct access to Puu Haleakala. Is there any assurance that PVT's landfill and related activities will not creep into either Ag-2 or P-1 zoned portions of this additional site, and that this parcel will be managed in a way that restores the health of the land?

- **Securing Adequate and Appropriate Biomass.** We would like to understand the plan for securing biomass to fuel the proposed gasification or anaerobic digestion system that is claimed will produce renewable energy on the PVT site.
- **Fire Hazards & Controls.** We are seeking considerable strengthening of a fire plan related to this site and the surrounding areas. With increased heat and greater proximity to the mountainous, sloping upland, the potential for a fire initiating at the site (as biomass accumulates on-site and fuel loads of bull grass or other flammable materials increases), there is increased risk to nearby neighborhoods for fires.
- **Alternatives to expansion/relocation.** We would like to see PVT, Department of Planning and Permitting, our City and State elected officials demonstrate increased urgency for a program of reducing C&D waste, particularly in the construction industry, as a feasible alternative to expanding and relocating the current landfill. The draft EIS contains no analysis of the ways producers of waste and the construction industry can reduce their waste stream of the materials that are ending up in Lualualei. While the recent changes the City has made to central Honolulu's bulky item pick-up is a small step in getting all residents of O'ahu to re-think how such waste is created and handled by the City, we have a long way to go. The construction industry needs to be engaged and innovative, out of the box concepts and processes need to be tested and deployed. The State's Elemental Energy Accelerator has brought new technologies to market for its field; surely something similar could be supported to address our overall problem with waste and the on-going assignment of its negative externalities to Wai'anae/Nānākuli and its predominantly Native Hawaiian residents. Greater, cross-departmental and cross-industry investment in truly exploring alternatives can extend the life of the current C&D landfill and potentially increase the sustainability of the Hawai'i construction industry and other waste producers.

Finally, we will share the perspectives of two young mahi'ai (farmers) about their hopes, aspirations and intentions for the use of this agricultural land in Wai'anae/Nānākuli.

*"I've been growing organic produce in Lualualei valley for 12 years, since high school. I believe that Lualualei Valley has the greatest potential to be a focal point to growing organic fruits and vegetables. The soil is amazing and I would want to keep agriculture land in agriculture. The movement of 'āina based organizations like MA'O is not only mentoring future farmers, but also mentoring future aloha 'āina practitioners that will always keep 'āina and people as the main and deeper reason of why we do what we do."* – Cheryse Kauai Sana, MA'O Farm Manager and graduate of MA'O Youth Leadership Training program, Leeward Community College (AA) and University of Hawai'i, Mānoa (BA)

*"Organic agriculture has a future in our community. Farming to me is a modern way of what my ancestors did. I want people to stop thinking that farming is a relic of the plantation era."* – Alisha "Nanea" Keli'i, MA'O Farm Apprentice and student in the University of Hawai'i, West O'ahu Sustainable Community Food Systems Bachelors of Applied Science program

Mahalo for providing this opportunity to comment on the Draft Environmental Impact Statement. We hope that you and PVT Land will fully address these concerns and others raised by our community before proceeding with any activities on this parcel.

On behalf of WCRC-MA'O Staff and Interns,

A handwritten signature in black ink, appearing to read "J. Kukui Maunakea-Forth". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

J. Kukui Maunakea-Forth,  
Executive Director

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January 10, 2020

Prince Kuhio Hawaiian Civic Club  
Attn: A. Makana Paris  
PO Box 4728  
Honolulu, Hawai'i 96812

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear A. Makana Paris:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Public Health:

The Proposed Action does not pose a health concern. The EIS includes a project-specific *Air Quality Impact Report* to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health (HDOH) for review as part of the current site's permitting and/or as part of the HDOH's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

Setbacks:

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu (CCH) Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's Solid Waste Management Permit (SWMP). The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The CCH does not require that landfills be sited 2 miles from residential or commercial development.

Alternative Locations:

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the CCH as possible locations for waste management and disposal.

The 2012 and 2017 CCH siting studies evaluated the same 11 sites using different criterion:

- 2012 Study - Table 2-5 MACLSS Community-Based Criterion shows the list of 19 criterion used by the City and County of Honolulu to evaluate and rank the 11 sites.



- 2017 Study - The CCH ENV re-evaluated the 11 sites identified in the 2012 MACLSS report against technical and logistical criteria developed to measure each site's feasibility, cost effectiveness, and functionality to serve as a future landfill location. This evaluation provided a ranking based on a different focus from that of the previous community-based ranking of the MACLSS. Six criteria: landfill lifespan, site development cost, roadway improvement cost, access road requirement, location relative to H-POWER, and acquisition were developed. For each criterion, a score was assigned to each site that measured that site's suitability to meet that criterion when compared against the other sites. All criteria were weighted equally.

The two CCH siting studies are attached to the Final EIS as Appendix L.

The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

#### PVT ISWMF Materials Acceptance and Disposal:

EIS Section 2.4.1, *PVT ISWMF Materials Acceptance and Disposal* describes the types of waste accepted at the PVT ISWMF per their SWMP.

The facility does not accept municipal solid waste (MSW), industrial waste, regulated hazardous waste, Toxic Substances Control Act-regulated polychlorinated biphenyl (PCB) contaminated materials, radioactive waste, or infectious waste, as defined by Federal and State regulations.

PVT does not accept mercury-containing devices, refrigerant-containing appliances, other major appliances ("white goods"), electronic waste (e-waste), automobiles and boats, pharmaceuticals and controlled substances, or other household garbage.

PVT ISWMF accepts the following types of material, per its SWMP:

- C&D debris (up to 3,000 tons per day);
- Source-separated materials for recycling or renewable energy, including wood, plastic, furniture, and mattresses;
- Asbestos-containing material (ACM) (double-bagged, up to 500 tons per week). Location of ACM is recorded and tracked using survey-quality Global Positioning System (GPS) technology;
- Liquid wastes for solidification with soil, coal ash, and feedstock ash;
- Contaminated soil (e.g., petroleum contaminated soils) for disposal or use in solidification of liquid wastes;
- Scrap metal and concrete, rock, and asphalt rubble; and
- Coal ash and feedstock ash accepted for HDOH-approved beneficial uses.

All C&D customers are subject to PVT ISWMF prequalification procedures, PVT's SWMP, and applicable State and Federal laws. PVT prequalifies all customers by requiring establishment of an approved account prior to delivering any material to the ISWMF. Special accounts and review procedures are required for customers proposing to dispose of contaminated soils, ACM, or liquid wastes for solidification.

PVT requires testing for several categories of C&D waste, including debris containing lead paint, sand blast sand, and soil. Additionally, fiberglass or steel waste storage tanks proposed for disposal must be certified clean by a qualified environmental contractor. Customers are required to submit test results and certifications for these materials before PVT accepts the waste.

#### Monitoring of Air Quality:

The EIS includes a project-specific *Air Quality Impact Report*, which evaluates potential dust emissions (Appendix B). This *Air Quality Impact Report* is the latest in a series of air quality and human health risk assessment studies prepared for the PVT ISWMF. The previous air quality impact and monitoring reports were completed by independent consulting firms and are as follows:

- Air Monitoring, PVT Land Company, Summary Report, November 2009-November 2010 (Morrow 2010).
- Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, October-November 2010 and May-June 2011 (Morrow 2011a, 2011b).
- Nanakuli Dust Study Technical Evaluation and Recommendations, December 2011 (Tetra Tech 2011) (also included as Appendix C of the EIS).
- Air Quality Impact Report, Proposed Operations Expansion PVT Integrated Solid Waste Management Facility (Morrow 2015).

The claim that only TSP were measured is inaccurate. Morrow conducted an Airborne Metals Analysis (2011a and 2011b) which measured Resource Conservation and Recovery Act (RCRA) metals (i.e., Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver), which were of concern to the HDOH. A summary of the airborne metals analysis is presented in EIS Table 3-11. The report concluded that "PVT Land Company is not contributing to any unusual concentrations of RCRA metals in local air quality."

PVT has a landfill gas monitoring and management program, which would be updated and implemented as part of the Proposed Action. Steel gas probes are strategically placed around the landfill as needed for gas monitoring and carbon dioxide injection. Landfill gases are produced when bacteria break down organic waste. The rate and volume of landfill gases generated by decomposition of C&D debris is extremely low compared to MSW landfills. The organic material in C&D debris is limited primarily to wood and clearing and grubbing debris, which decays extremely slowly. At the PVT ISWMF, organic materials are removed to the extent practical and recycled as feedstock for energy providers. Because of the lack of C&D landfill gases, PVT injects and sequesters carbon dioxide gas in the landfill. The carbon dioxide gas drives out oxygen, minimizing fire potential and generation of odorous gases.

Given the inert nature of C&D debris, there is no need to measure for volatiles as they are not produced.

#### Monitoring of Water Quality:

EIS Section 3.4, *Water Resources* discusses potential impacts of the Proposed Action on surface and groundwater quality. The Proposed Action would be subject to the same BMPs, operational controls, and

regulatory requirements as the existing PVT ISWMF to prevent water quality degradation. There would be no change in the types of materials accepted at the Project Site, except there would be no ACM accepted. The Proposed Action would comply with the State's Water Quality Standards and other applicable provisions of HAR Ch. 11-54 and 11-55.

Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's SWMP. There is always at least one monitoring well located upgradient from and unaffected by the landfill operations to compare to downgradient water quality. Groundwater production wells are also monitored for select analytes.

The following groundwater parameters are monitored semiannually (Juterna 2019):

- Volatile Organic Compounds
- Total Dissolved Solids
- Chloride, Sulfate
- Alkalinity as Calcium Carbonate, Bicarbonate
- Calcium, Magnesium, Potassium, Sodium
- Field Measured Temperature, Conductivity, pH and Water Level

The following parameters are monitored once every 5 years:

- Arsenic, Cadmium, Chromium, Iron, Lead
- Extractable Petroleum Hydrocarbons – Diesel Range Organics
- Total Organic Carbon

The monitoring results are provided to HDOH semiannually and are available for review at the HDOH, Solid and Hazardous Waste Branch, Solid Waste Management Office. Appendix A of the EIS summarizes the groundwater data. PVT has conducted groundwater quality monitoring from their monitoring wells since 1992. This data demonstrates the PVT ISWMF does not negatively impact groundwater quality.

The Notice of General Permit Coverage (NGPC) for PVT ISWMF's NPDES Permit specifies the facility's stormwater monitoring and testing requirements and stormwater discharge limitations (EIS Appendix A). PVT will obtain an NPDES Permit for the Proposed Action. Discharge Monitoring Reports are submitted annually to the HDOH. PVT's current permit requires stormwater discharge be tested annually for 21 parameters. The results for years 2007 to 2018 are included in the EIS Appendix A. The monitoring data indicates that stormwater discharged from the PVT ISWMF does not pose an environmental risk to Ulehawa stream.

#### Landfill Liner:

C&D landfills are only required to install a clay barrier; the proposed liner meets State requirements for MSW landfills. The life expectancy of a high-density polyethylene liner in buried applications, such as solid waste landfills, is up to 300 years. The life expectancy is based on manufacturer studies presented to the US EPA. The landfill liner installation would be certified by a professional engineer and meet rigorous quality assurance standards. The stormwater management system and leachate control and removal system will support geologic integrity of the Project Site. The landfill design will be subject to HDOH review and approval prior to issuing the update to the SWMP.

In accordance with the leachate monitoring program, leachate generated from landfill disposal cells was collected annually over the past twelve years and tested for the same analytes as the monitoring wells. Firstly, the leachate is not hazardous to human health or the environment. No analytes were detected

above HDOH Environmental Action Levels. Second, leachate profiles are different when compared with the chemical profiles of the groundwater wells, Ulehawa Steam, and Stormwater Basin C,. This means the leachate is not influencing groundwater (EIS Appendix A).

Given the above data and the certifications of professional engineers, a further liner reliability analysis is not necessary for the Proposed Action.

#### Gasification Unit:

The statement that the gasification system will be emitting “very low levels of particulates, nitrogen oxides, sulfur oxides, and carbon monoxide” is based on specifications from the manufacturer Besi, which operates similar units throughout the United States. The syngas cleanup process is designed so that the syngas used for electricity generation are well below the regulatory requirements for air emissions. The gasification unit would be subject to a HDOH Clean Air Branch non-covered source permit.

The gasification system would not produce significant quantities of tars, heavy metals, halogens and alkaline compounds because the feedstock is mostly wood. We enclose with this letter an article that recently appeared in Biomass Magazine. As reported, there are many markets for biochar, the byproduct of gasification. Handling, beneficial reuse, and/or disposal of gasification byproducts would be in accordance with PVT’s SWMP.

#### Anaerobic Digestion System:

Emissions from the anaerobic digestion system would be subject to an HDOH Noncovered Source Permit. The biogas cleanup process is designed so that the biogas used for electricity generation results in air emissions well below the regulatory limits. There is no odor as the feedstock is mostly wood and grass. Explosions are highly unlikely.

#### Photovoltaic and Landfill Cells Impact on Habitat Degradation:

EIS Section 3.7, *Biological Surveys* discusses potential impacts of the Proposed Action on botanical, avian, and terrestrial mammalian species on the Project Site. The *Biological Surveys Report* (Appendix E) summarizes the findings of a biological surveys conducted at or in the vicinity of the Project Site, including four faunal surveys conducted by Reginald David in 2004, 2007, 2008 and 2018 and four botanical surveys conducted by Eric Guinther in 1992, 2003, 2007, and 2018. The report concluded that the Proposed Action is not anticipated to have impacts on plant, avian, or mammalian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes.

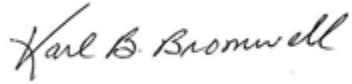
#### Municipal and Hazardous Wastes:

As previously mentioned, the facility does not accept MSW, industrial waste, regulated hazardous waste, Toxic Substances Control Act-regulated PCB contaminated materials, radioactive waste, or infectious waste, as defined by State regulations. It would also not produce any hazardous waste. Leachate and the byproducts of the gasification unit are not hazardous wastes, as defined by State regulations. The Proposed Action would not be subject to Resource Conservation and Recovery Act hazardous waste regulations.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive style with a large, stylized 'K' and 'B'.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

## Source

[Biomass Magazine](#)

## Publication Date

September 4, 2019

Markets for biochar, most commonly produced as a gasification or pyrolysis byproduct, are expanding.



Aries Clean Energy gasification plant at Lebanon, TN

By Kathleen Draper, U.S. Director, Ithaka Institute for Carbon Intelligence

When you ask someone if they have heard about biochar, more often than not, you will get a quizzical stare. Fortunately, though, this is beginning to change, as the variety and scale of potential markets for biochar continues to expand.

Biochar is one of the products produced from thermochemical conversion (TC), the baking of organic material using little or no oxygen. TC can, depending on the particular technology used, also generate heat, electricity, bio-oil and wood vinegar. It is increasingly viewed as a cost-effective option for diverting and reducing organic materials currently sent to landfills, which is beginning to take on increased urgency as landfills fill up and organics mandates are adopted by more and more states. Depending on the temperatures used, volume reduction of 75 to 95 percent can be achieved. Imagine reducing a gallon of biomass to a quart (75 percent reduction) or a cup (93.8 percent reduction). Unlike incinerated material, however, the leftover solids do not have to be shipped off as toxic waste. On the contrary, the highly stable carbon material can be used to improve soils, purify water, reduce flooding, remediate brownfields, harvest excess nutrients, lighten up concrete as well as a host of other applications.

The type of biomass being carbonized has a significant impact on the properties of the resulting biochar, as does the temperature, hold time, and technology used to convert the biomass. As an example, research has shown that woody biomass tends to have high carbon, but low nutrient

content. Manures and sewage sludge, on the other hand, have lower carbon but higher nutrients. Other variable properties that impact end use and performance include surface area, bulk density, pH, electrical conductivity, nutrients and heavy metals. Increasingly, biochar producers are learning how to produce “fit for purpose” biochars by varying the organic material, processing parameters, and optimizing pre or post processing to adjust the chemical, biological, physical and electrical properties.

A commonly posed question is “What is the difference between charcoal and biochar?” Many use the words interchangeably. Generally speaking, charcoal is used for energy production, whereas biochar is a term used to refer to high-carbon, charred materials that are not subsequently burned but are added to soils or other long-lived products with a goal of preventing the carbon from returning to the atmosphere. Recently, biochar was highlighted as one of only six negative emissions technologies recognized by the Intergovernmental Panel on Climate Change as providing significant opportunity for mitigating climate change. Charcoal is most often made from wood or woody byproducts, while biochar can be made from a much broader range of organic materials including crop residues, food waste, digestate, manures, seaweed, invasive species, and, of course, wood. Another difference is the processing temperature. Yields for charcoal are generally higher than biochar due to lower temperatures. This maximizes heating value but produces carbon with lower surface area and more volatiles.

The most common TC technologies used to produce biochar are pyrolysis (no oxygen) or gasification (limited oxygen). However, a much broader array of technologies, some ancient, some cutting-edge, can be used. Perhaps the oldest technique is a kiln that has been used for millennia to produce charcoal as well as bricks, pottery and more. Hydrothermal carbonization, which works well with high-moisture feedstock is one of the newer carbonization technologies.

One of the better-known combined-heat-and biochar projects is known as the Stockholm Biochar Project. An initial pilot plant used a pyrolysis technology from Germany (Pyreg GmbH) to convert green waste from the city into heat that was utilized in the district heating system, and biochar that was used for urban tree planting and stormwater management. Based on the success of the pilot, the system is being replicated in other cities in Sweden, Europe and beyond.

Electricity production via gasification with a biochar byproduct can be found at a growing number of installations. Since 2016, Aries Clean Energy has been running a plant in Tennessee that provides electricity to a nearby wastewater treatment facility. This power is generated using wood waste that was previously sent to landfills. The plant can annually produce 1,000 tons of consistent, high-carbon biochar that meets the International Biochar Initiative standards for use in soils. **Editor’s note: Aries GREEN™ Biochar holds both International Biochar Institute and USDA certifications. For more info: <https://ariescleanenergy.com/biochar/biochar-sales/>**

Syncraft, an Austrian company making gasification equipment, has units that provide enough electricity for a small village, and the ability to vary biochar output according to market conditions. The biochar produced in their European locations is of sufficiently high quality that it is sold as an animal feed additive (something which is not currently legal in the U.S., though many in the industry are working to change this). Oregon Biochar Solutions and Pacific Biochar both promote products which result from biomass to energy production.



One of the original markets for biochar was agriculture. This still remains a large market, though the economics can be challenging in certain farming scenarios. The impact biochar has on soils and different crops is inconsistent, as it tends to have a greater yield-boosting impact on poorer soils and in regions where it is difficult to build a deep organic soil layer. Promising ag markets for biochar must necessarily focus where the economic impact is higher than the cost of biochar. In drought-challenged areas where farmers pay for water, biochar can help improve water management. In certain types of perennial agriculture, biochar use can get trees into fruit or nut production earlier. As certain types of biochar can reduce plant uptake of metals, biochar use could mean the difference between being able to market your products or not when farmers find they have toxic soils.

Much of the more recent focus for biochar has been nonagricultural markets where activated carbon (AC) has traditionally been used such as filtration, remediation, animal feed and more. Biochar can often compete effectively with AC from a cost perspective. It is now being looked at as a replacement for carbon black which is used as a filler and dye in various types of plastics and in tires.

Currently, perhaps one of the biggest markets by volume in the U.S. is composting. While some may perceive biochar to be competitive with composting, the two are actually synergistic. Adding 10 to 20 percent biochar in the early stages of composting can reduce processing time, increase heating temperatures which kills off more pathogens or weed seeds, retain more nutrients and boost long-term carbon content, all of which translates into high-value compost.

Another high-volume, though low-value market that is beginning to emerge is in livestock farming. Biochar can be used as bedding or as part of a manure management system to reduce odors, retain nutrients and improve the carbon content in the manure.

Stormwater management is likely to be a large market for biochar as cities and residents look for ways to increase infiltration of water while reducing toxins. Research at the University of Delaware concluded that biochar could effectively compete with many of the current best management practices in stormwater management.

These and other evolving markets take time to develop at a local and regional level. One challenge for those making biochar as a byproduct of biomass energy production is that these are new products and new markets that are not well understood. To alleviate this challenge, some biochar technology vendors are offering to buy all biochar produced, as they are interested in waste mitigation as well as biochar marketing.

Author: Kathleen Draper  
U.S. Director, Ithaka Institute for Carbon Intelligence  
Kdraper2@rochester.rr.com  
[www.biochar-journal.org](http://www.biochar-journal.org)



*Via E-mail*

fkrantz@honolulu.gov  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7th Floor  
Honolulu, HI 96813

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

The Prince Kūhiō Hawaiian Civic Club **OPPOSES** the Draft Environmental Impact Statement (DEIS) application by PVT Land Company Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli

The Prince Kūhiō Hawaiian Civic Club stands in solidarity with Ke One o Kakuhīhewa, the O'ahu Council of the Association of Hawaiian Civic Clubs and members of the Wai'anāe moku community to say "no" to more landfills in our communities (Wai'anāe Communities Sustainable Communities Plan, March 2012, 4-17).

*Stop the Public Health Crisis*

According to the Center for Disease Control/National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

We affirm all of the kama'āina testimony presented since the 1980s -- at Neighborhood Board meetings, City and County of Honolulu landfill site selection meetings, State Land Use Commission hearings, Department of Health hearings, and community gatherings at churches and other locations -- voicing concerns over the adverse health impacts of living and working in close proximity to landfills in general and the operations and plans of PVT Land Company, Ltd. (PVT) in specific. We affirm their just call to have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). From PVT's own accounting, current and proposed landfill

operations are only 750 ft. from the nearest residences (PVT ISWMF Relocation EISPN, 2-11). There exists no other such landfill in Hawai‘i that abuts hundreds of residences and so closely.

Allowing any landfill’s continued and relocated operations in a community, given the convergence of scientific evidence demonstrating the negative health effects of landfills and their operations, is a travesty and morally reprehensible (*See Waste and Human Health – World Health Organization, Nov 2015; Living near a landfill may damage your health, International Journal of Epidemiology, Oxford University Press, 2016*). We must secure Environmental Justice for those that live, work, and play in Nānākuli (Hawai‘i Environmental Justice Initiative Report, State of Hawai‘i Environmental Council, 2008).

### *Site Selection*

The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu‘u Heleakalā that is agriculturally zoned and borders the Pu‘u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā‘ili communities and will be right along the houses of Pu‘u Heleakalā neighborhood. We respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

This is a violation of the spirit, if not the letter, of the EIS law that no alternate sites were adequately considered. Further, the use of the findings of the Report of the Mayor’s Advisory Committee on Landfill Site Selection (2012) for a starting place for appropriate sites for consideration while neglecting to use its foundational weighted criteria is absurd, including proximity to residences.

### *Limited Data and Monitoring of Air and Water Quality*

There has been limited to no monitoring and data collection for an accurate assessment of air and water quality given current PVT (1) activities that recover and divert debris or (2) landfilling. Also, there is no plan to increase monitoring or data collection for air and water quality given the proposed action. Currently, the PVT Landfill Air Quality Reports are incomplete. First, the analysis done regarding air quality appears to use only, or primarily, data received from the interested party, namely PVT Land Company, Ltd. from a self-reporting total suspended particles (TSP) program. Second, the data PVT provides is *only* TSP, nothing else. There has not been, nor any plans to do, measurements of volatile, semi-volatile, and non-volatile contaminants that would reasonably be associated with the decomposition of the debris that are landfilled, including but not limited to methane, hydrogen sulfide, non-methane organic compounds, hazardous air pollutants, carbon dioxide, sulfur dioxide, and volatile organic compounds. There has not been, nor any plans to do, monitoring of volatile contaminants in the soil. Finally, the dust that was monitored in the TSP program was not analysed for chemical contaminants.

It is recommended that Air Quality Reports be done to address the known contaminants that come from the debris that the current landfill operation, and proposed action, would likely to have. Such contaminants would include the noted debris in the Draft EIS and also, but not limited to, the EPA recognized debris from typical residential demolitions:

- Asbestos-containing materials (ACM)
- Mercury-containing devices
- Lead-based paint
- PCBs in caulk

- Household hazardous waste
- Light systems
- Mercury
- PCBs
- Mold
- Refrigerant-containing appliances
- Other major appliances ("white goods")
- Electronic waste (e-waste)
- Automobiles and boats
- Tires
- Pharmaceuticals and controlled substances
- Furniture, mattresses and other household garbage

The concerns articulated over the air monitoring and data collection is shared for the water quality program as well. As such, how can the Draft EIS claim anything about public health and safety without

### *Landfill Liner Failure*

What is the basis for the conclusion that the Landfill Liner lifespan is 300 years?

Recommend doing a liner reliability analysis to determine the likelihood of failure given typical causes of failure, including but not limited to: bad geomembrane seams and/or clay compaction; installation damage; not safeguarding liner in operation; pipes penetrating liner; clogging of the leachate collection and removal system; geotechnical failure; unanticipated chemical attack; and breach by vertical pipes.

What are the likely scenarios when there is containment system failure where there is egress and the leachate head is at least 30 cm? (See L. J. Rodic-Wiersma and L. H. J. Goossens, "Assessment of Landfill Technology Failure," In: T. H. Christensen, R. Cossu and R. Stegmann, Eds., Proceedings Sardinia 2001, 8th International Waste Management and Landfill Symposium, Environmental Sanitary Engineering, CISA, Cagliari, Vol. 1, 2001, pp. 695-704.)

### *Gasification Unit*

What is the basis for saying that the gasification system will be emitting "very low levels of particulates, nitrogen oxides, sulfur oxides, and carbon monoxide" (2-20)?

There was no mention, analysis of the amounts and potential impact, nor plan for the handling and disposal of other potential byproducts of the gasification system including, but not limited to, tars, heavy metals, halogens and alkaline compounds.

### *Anaerobic Digestion System*

What is the estimated annual fugitive emissions from the anaerobic digestion system, including methane? How are such emissions going to be mitigated? What is the plan to address the odor from the anaerobic digestion system, particularly the pretreatment and the aerobic composting? What is the likelihood of explosions?

### *Photovoltaic and Landfill Cells*

What are the plans to address habitat degradation from the use of 7 acres for photovoltaic

activity? What habitat degradation will occur with the creation of landfill cells and necessary areas of operations for the surrounding areas? Why was there no plant or botanical survey of the proposed site?

*Municipal and Hazardous Wastes*

The 2.5.6 section seems to present a false conclusion that the proposed action would not produce hazardous waste. Would not the proposed action at least generate leachate akin to multisource leachate (F039) from those items that contain waste hazardous components commonly found in construction and demolition debris, including, but not limited to, heavy metals and asbestos? Would not the gasification unit produce hazardous waste? As such, would not the proposed action be subject to Resource Conservation and Recovery Act hazardous waste regulations?

Let us recall our ancestral wisdom and state motto, ua mau ke ea o ka 'āina i ka pono, and let the land be perpetuated in righteousness - not with a landfill in our community that causes adverse health effects. As such, we call upon the Department to withdraw their support for the operating of any landfill in Lualualei. We all deserve a clean and healthy environment. Mahalo for your time and consideration.

Ke Aloha 'āina,



A. Makana Paris  
Pelekikena

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January 10, 2020

Self-Help Housing Corporation of Hawaii  
1427 Dillingham Boulevard  
Suite 305  
Honolulu, Hawaii 96817  
Attn: Claudia Shay, Executive Director

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Claudia Shay:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

As you note, a Phase I Environmental Site Assessment identifies "recognized environmental conditions" or "RECs." The objective is to identify conditions indicative of releases and threatened releases of hazardous substances on, at, or to the subject property (See 40 CFR Part 312). The environmental professional looks to current and past property uses, current and past uses of hazardous substances, etc. (40 CFR § 312.20(e)).

While the ASTM may recommend a search radius, your environmental professional must take into account multiple factors in making his or her determination of whether there is a recognized environmental condition. Distance does not "clear" a site.

PVT does not accept or create hazardous waste, toxic chemicals, or radioactive substances, as defined by State and Federal regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable State and Federal laws. Special wastes (e.g. asbestos and contaminated soils) have special acceptance, handling, and disposal procedures. PVT does not generate toxic gases and has a landfill gas monitoring and management plan as required by their Solid Waste Management Permit.

Potential soil, water and air contamination is mitigated through design and operational best management practices. PVT has fourteen years of groundwater and stormwater monitoring data and ten air quality and human health risk assessments to show that the existing PVT ISWMF does not negatively impact the environment or affect the health and safety of residents. The same mitigation measures at the existing site would be implemented at the relocation site.

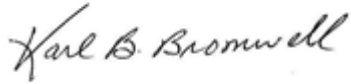
PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the CCH Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and its current Solid Waste Management Permit.



We appreciate your participation in this review process. Although your letter was submitted after the comment period, your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



## **SELF-HELP HOUSING CORPORATION OF HAWAII**

1427 Dillingham Blvd., Suite 305 • Honolulu, Hawaii 96817  
Telephone: (808) 842-7111 • Toll Free: 1-800-336-4035 • Fax: (808) 842-7896

September 20, 2019

Kathy Sokugawa, Acting Director  
Department of Planning & Permitting  
650 S. King St., 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Ms. Sokugawa:

Subject: Opposition to the PVT ISWMF Relocation Project EIS

The Self-Help Housing Corporation of Hawaii is opposed to the PVT Integrated Solid Waste Management Facility (ISWMF) Relocation "Project" which plans to relocate their existing facilities from the western side of Lualualei Naval Road in Nanakuli to the eastern side of the Lualualei Naval Road (TMK (1) 8-7-009: 007). The owner of this property is Leeward Land Company, Ltd., an affiliate of PVT.

Although SHHCH is not currently an adjacent landowner, SHHCH has a contract to purchase an adjacent parcel (TMK (1) 8-7-008: 076) and develop a 88 lot affordable housing subdivision. SHHCH did undertake due diligence and cleared an Phase I ESA with no REC's in April, 2018. At that time SHHCH staff did talk to principals of PVT who clarified that their actual current operations were .75 mile from the proposed SHHCH site. Although the PVT official said they were going to expand their operations, he did not give an estimated time nor indicate that the operations were actually going to relocate to the new site.

With the relocation of the PVT operations their new site will be directly behind the proposed SHHCH site. Although PVT has indicated that they are willing to set up a 750' buffer zone from residential areas, this will not be sufficient to clear an Environmental Assessment. In accordance with ASTM 1527-13 the recommended distance from a landfill site to clear an EA for a residential project is .5 mile.

If the Self-Help Housing Corporation of Hawaii is able to negotiate an agreement with PVT Land Company, Ltd. whereby they will set up a buffer zone of .5 mile from the SHHCH proposed site, then SHHCH will go ahead with the Nanaikeola Self-Help Housing Project of 88 lots targeted to families whose incomes are below 80% of the area median income. Given the track record of 685 affordable housing units on Oahu, Kauai, Maui and Molokai with another 48 units under construction, it is very likely that SHHCH would be successful in its endeavors to develop an 88 lot affordable housing project at the site denoted by TMK (1) 8-7-008- 076. Given the dire need for affordable housing, particularly for those whose incomes are below 80% of the area median income, it is in the best interests of the entire community if PVY Land Company, Ltd. could negotiate with SHHCH to achieve a solution satisfying all parties.

SHHCH understands the need for the operations of the PVT Landfill and was informed by their principals and their EIS that they do not accept toxic waste nor hazardous materials. Thus, SHHCH is not in principle opposed to their operations. In fact there is currently a PVT employee building in our self-help

housing projects. However, if SHHCH is to proceed with its proposed 88 lot affordable housing project, there must be a .5 mile buffer zone from the landfill site to clear the EA.

It is my sincere desire to reach a written agreement with PVT Land Company, Ltd. satisfactory to all parties. Otherwise, SHHCH will not proceed with an affordable housing project which is desperately needed to provide quality affordable housing units to low income families.

I would appreciate your prompt response to this letter for the best interests of the community although I realize that SHHCH is responding to the EIS outside of the comment period. As PVT Land Company states that they are responsive to the community needs, I am relying on their concerns for the residents of the community and prospective low income home owners to respond to this request. I can be reached by phone at 842-7111 or by e mail at [selfhelphawaii@gmail.com](mailto:selfhelphawaii@gmail.com).

Thank you very much.

Sincerely,

  
Claudia Shay  
Executive Director

Cc: Steven E. Joseph, Vice-President & Operations Manager  
PVT Land Company, Ltd., 87-2020 Farrington Hwy., Waianae, HI. 96792

Karl Bromwell  
Hart Crowser, Inc.  
7 Waterfront Plaza, 500 Ala Moana Blvd, Ste. 7-240, Hon, HI. 96813

Cynthia Rezentes, Chair, Nanakuli-Ma'ili Neighborhood Board # 36  
925 Dillingham Blvd., Ste. 160, Hon, HI. 96817

Tom Eisen, OEQC, 235 S. Beretania St., #702, Hon., HI. 96813

January 10, 2020

Sierra Club of Hawaii  
Attn: Lauren Watanabe  
Oahu Group  
P.O. Box 2577  
Honolulu, Hawaii 96803

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Lauren Watanabe:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Public Health:

EIS Section 2.4.1, *PVT ISWMF Materials Acceptance and Disposal* describes the types of waste accepted at the PVT ISWMF per their Solid Waste Management Permit (SWMP). PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's SWMP, and applicable State and Federal laws.

PVT accepts AES ash for beneficial uses. PVT primarily uses AES ash to prevent subsurface fires. AES ash is placed along the sides and on the top of the debris and then covered with soil. AES ash is not left exposed on the landfill. AES ash does not pose a risk to human health or the environment. The Hawaii Department of Health required PVT to have an independent expert conduct a human health risk assessment using EPA-approved methods. The human health risk assessment report for AES ash concluded: "The beneficial use of AES ash at PVT ISWMF does not pose a potentially significant threat to human health and the environment." Details on this risk assessment are provided in EIS Section 3.5, Air Quality.

The Proposed Action does not pose a health concern. The EIS includes a project-specific *Air Quality Impact Report* to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health (HDOH) for review as part of the current site's permitting and/or as part of the HDOH's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;

- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

The Proposed Action would not produce significant exhaust emissions (EIS Section 3.5, *Air Quality*).

#### Agricultural Lands:

EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. The Proposed Action meets the criteria for "unusual and reasonable use" of lands that are not suitable for agriculture.

EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristic* addresses potential impacts to current and future land uses in the vicinity of the Project Site, which includes agricultural uses. The Proposed Action would be compatible with current and future land uses and is not expected to encourage or discourage changes in land use in the Waianae Region.

#### Traffic:

The EIS discusses potential impacts to traffic in Section 4.1, *Transportation*. The Traffic Management Consultant prepared a *Traffic Impact Assessment Report* for the Proposed Action, which is included as Appendix F to the EIS. The Report indicated less than significant impact from the Proposed Action and no further traffic impact studies nor mitigation measures were warranted. PVT is permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day and up to 3,000 tons of C&D debris per day. PVT does not propose to increase these limits.

#### Groundwater:

PVT has conducted groundwater quality monitoring from their monitoring wells (Figure 3-16) since 1992, which demonstrate the PVT ISWMF landfill operations and controls are effective in protecting groundwater quality. Groundwater and leachate monitoring are conducted in accordance with PVT ISWMF's Groundwater and Leachate Monitoring Plan, which is a requirement of the facility's SWMP. There is always at least one monitoring well located upgradient from and unaffected by the landfill operations to compare to downgradient water quality. Further information on water resources can be found in EIS Section 3.4, *Water Resources*.

#### Bottled Water:

We'd like to offer a clarification on the PVT staff using "bottled water for drinking" text noted in section 2.5.6.2. The staff fills their personal, reusable water bottles from larger 3-5 gallon water jugs located in communal areas on the property.

#### Stormwater Management:

The stormwater management system is designed and constructed to manage runoff from a 25-year, 24-hour storm as required by the solid waste regulations (Hawaii Administrative Rules § 11-58.1-15(g)).

In addition to the stormwater basin located at the south end of the site, the Proposed Action would be designed with significant, natural stormwater features that will allow percolation and minimize erosion. With the designed stormwater system, it is anticipated that future extreme storm events and the sea level rise associated with climate change will be properly managed with no impact to the environment.

The existing PVT ISWMF stormwater management system was designed with conservative assumptions and constructed in accordance with the above referenced solid waste regulations. This system has performed well during extreme storm events for the past 20 years and it is anticipated that it will continue to perform well during the most powerful storm events in the future.

Natural hazards, including those related to climate change, are addressed in Section 3.3, *Natural Hazards*.

#### Alternatives Analysis:

The EIS includes an alternatives analysis in accordance with HAR 11-200-17(f). The EIS considered alternatives and their environmental benefits, costs, and risks.

Alternatives considered in the EIS include alternative designs and technology, postponing the Proposed Action, and alternative locations. The EIS retained and evaluated the environmental benefits, costs and risks of the Proposed Action and No Action Alternative. Under the No Action Alternative, the City and County of Honolulu's (CCH) Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the CCH as possible locations for waste management and disposal. A 2012 CCH siting studies originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

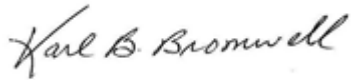
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

The two City and County of Honolulu siting studies are included in the Final EIS as Appendix L.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist





# SIERRA CLUB OF HAWAI'I O'AHU GROUP

September 6, 2019

Franz Krantz, AICP  
Department of Planning and Permitting,  
City and County of Honolulu  
650 S. King St., 7th Floor,  
Honolulu, HI 96813  
(808) 768-8046, fkrantz@honolulu.gov

RE: In opposition to the PVT Integrated Solid Waste Management Facility (ISWMF)  
Relocation - Draft Environmental Impact Statement Comments

Dear Mr. Krantz,

On behalf of our 8,000 members and supporters throughout O'ahu, I thank you for the opportunity to provide comments on this project. The Sierra Club of Hawai'i's O'ahu Group has a longstanding investment in protecting our natural resources and access to clean air, water, and healthy living conditions. We do not believe that the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill should be in close proximity of community. We stand with the Nānākuli community in their push to have the PVT relocated to a site that will not pose a health risk to people or natural resources.

The current PVT landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. A thin 750-foot "buffer zone" separates the hazardous waste materials dumped there from keiki and kupuna, places of worship, farms, and Ulehawa stream. On top of the waste toxins, PVT Landfill also takes the hazardous coal ash from AES Hawai'i, LLC and fills their grounds daily. Coal ash is toxic. It contains harmful chemicals such as arsenic, lead, heavy metals. This accumulation of toxins increases health risks for those workers and residents breathing in coal ash everyday.

U.S Census and other data that Nānākuli Homestead and the neighborhoods of Auyoung Homestead Road and Mōhihi Street near PVT's existing ISWMF site have the 2nd and 3rd lowest life expectancies in the State. The life expectancy of residents in this area are a full 8 to 10 years shorter than the State average of 82 years. How does the project strive for a reduction in residents' exposure to air pollution from dust, exhaust emissions, and other activities on the proposed ISWMF relocation site? How does the project proactively work to improve the health of its immediate residents?

The proposed project site for PVT's *Integrated Solid Waste Management Facility (ISWMF) Relocation* is less than 1,300 feet away from farm land. This is a major concern to those that steward the land as well as those who depend on their crop yields. We do not agree with the PVT's intent to seek a Special Use Permit in order to establish a C&D debris management operation on land zoned by the city and state for agricultural use. We believe this proposed ISWMF relocation is a major threat to the viability of diversified agriculture in this area and contrary to the State Constitution's aim to conserve and protect agricultural districts.

Residents of the area have consistently raised concerns about the significant negative effect of excessive truck traffic related to current operations at the PVT landfill. The DEIS is deficient in analyzing and addressing these concerns. Specific studies should be conducted regarding the number and frequency of trucks using the facility, their size and load content. The analysis must assess the negative effect of this truck traffic on the residents of this area, as well as other drivers in this area. The EIS should outline the specific actions PVT will undertake to reduce these negative effects to a level that is less than significant.

In regards to water safety, the planned use of existing wells on the proposed site, and the "future wells" mentioned throughout the DEIS could result in cross-contamination into the underlying aquifer. Where is the assessment, monitoring, and safety plan in the event such contamination occurred?

Also, the DEIS mentions that PVT staff use "bottled water for drinking" described in Sec. 2.5.6.2. Single-use plastics and bottled water are a part of the problem, they have been reported as the number one cause clogging our waste-stream. Our county is already dealing with an overloaded waste and recycling problem, operation of the PVT Landfill should not contribute to this problem.

Surface and Stormwater management efforts described throughout the DEIS, Sec 3.3.3.1 and Sec 3.4.2.1, are based on a 25-year 24-hour rain event (e.g.,). However, in the last few years, Hawai'i has had several rain events more intense than this. The world and our island community are facing a climate crisis that threatens the quality of life for Hawai'i's citizens if we don't take immediate action to mitigate and adapt. What is PVT's plan to address climate change impacts to its facility?

In regards to alternatives analysis, the DEIS fails to offer a sufficient analysis of alternative locations. The Hawai'i Administrative Rules (HAR) 11-200-17(f) requires that alternatives be considered in an Environmental Impact Statement (EIS) regardless of cost. But the current DEIS only provides "postpone" and "no action" alternatives to the current location. Failing to explore other locations gives the impression that there are no feasible alternatives to the proposed location. This creates a bias before environmental review even begins. Considering that this is the only Construction and Demolition (C&D) waste facility available in the state, the proposed action appears forced upon O'ahu with no other viable options to consider. As HAR 11-200- 17(f) requires alternatives to be considered regardless of cost, PVT should explore parcel acquisitions or leasing in different locations farther away from communities and critical natural resources like streams.

The issue of an alternative locations is one of justice, as well as environment. No single community should suffer the burden of our state's energy supply or waste management facilities. The Hawai'i State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). We strongly urge the City to work towards a just and equitable future everyone on O'ahu, including the people of the Wai'anae Coast. We want to see a just transition to a clean and healthy future, where no one is "neighbor" to toxic facilities.

Mahalo for providing this opportunity to comment on the Draft Environmental Impact Statement. We hope that you and PVT Land will fully address these concerns and seek a new location that will not harm any community on our island.

Sincerely,  
Lauren Watanabe  
Sierra Club O'ahu Group

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January 10, 2020

United Public Workers Union  
Attn: Dayton M. Nakanelua, State Director  
United Public Workers Union  
AFSCME Local 646, AFL-CIO  
1426 N. School Street  
Honolulu, Hawaii 96817

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Dayton M. Nakanelua:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

The Proposed Action does not pose a health concern to the community. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

PVT is not a hazardous waste landfill. PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable Federal and State laws.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential

sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

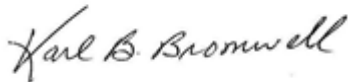
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**

Principal Environmental Scientist

Hart Crowser, Inc.

September 4, 2019

Via E-mail / fkrantz@honolulu.gov

City and County of Honolulu

Department of Planning and Permitting

650 South King Street, 7th Floor

Honolulu, HI 96813

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Testimony by Dayton M. Nakanelua, State Director

United Public Workers Union (UPW) AFSCME Local 646, AFL-CIO

Aloha Mr. Franz Krantz, AICP:

The **United Public Workers Union** stands in solidarity with hundreds of our members that reside in Nānākuli and the greater community of Wai‘anae moku to say no more landfills in our communities (Wai‘anae Communities Sustainable Communities Plan, 2012, 4-17). There is a **public health crisis** in Nānākuli and Mā‘ili. According to the Center for Disease Control/National Center for Health Statistics Neighborhood Life Expectancy Project, our members and their families within 2 miles of the current PVT Landfill live 10 years less than the state average of 82 years, being the 2nd and 3rd lowest life expectancies in the entire state. This is unacceptable. Every community in Hawai‘i as a matter of fairness and decency deserves a “clean and healthful environment” (HI State Constitution Article XI, Section 9; In re Maui Elec. Co., 2017 Haw.) PVT currently operates only 750 feet from residences and its proposed expansion is more of the same (Draft Environmental Impact Statement: PVT Integrated Solid Waste Management Facility - Expanded Recycling, Landfill, Grading and Renewable Energy Project). This buffer zone is not enough, no other landfill in Hawai‘i is so close that within two miles of the landfill operations are numerous residences, schools, places of worship, parks, stores, medical clinics, and kūpuna housing that over 18,000 people daily live, work, and play.

The global scientific community affirms what the community of Wai‘anae moku has been living through -- especially those that live, work, and play in Nānākuli and Lualualei-- that landfills are a health hazard (See Vrijheid M., Health effects of residence near hazardous waste landfill sites: a review of epidemiologic literature. *Environ Health Perspect*, 2000; Njoku PO, Edokpayi JN, Odiyo JO, Health and Environmental Risks of Residents Living Close to a Landfill: A Case Study of Thohoyandou Landfill, Limpopo Province, South Africa. *Int J Environ Res Public Health*, 2019; Waste and Human Health: Evidence and needs, World Health Organization Nov 2015).

We ask that the Department of Planning and Permitting heed the voices of our community and support their efforts for a “clean and healthful environment.” Please do not allow PVT to relocate to TMK: (1) 8-7-009:007. We support the relocation of the PVT Landfill to an isolated area that ***should and still needs to be identified and vetted*** in the 2.7 Alternatives to the Proposed Action in the Draft EIS. Stop the **public health crisis** in Nānākuli and Mā‘ili. Thank you for the opportunity to submit this testimony.

CC: Councilmember Kimberly Pine, Councilmember Ron Menor, Mayor Kirk Caldwell



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January 10, 2020

Local 5 Hawaii  
1516 South King Street  
Honolulu, Hawaii 96826-1912  
Attn: Gemma G. Weinstein, President

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Gemma G. Weinstein:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

The Proposed Action does not pose a health concern to the community. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



*Eric W. Gill, Financial Secretary-Treasurer*

*Gemma G. Weinstein, President*

*Godfrey Maeshiro, Senior Vice-President*

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Thursday, September 5, 2019

Department of Planning & Permitting  
City & County of Honolulu  
650 S. King St., 7<sup>th</sup> Floor  
Honolulu, HI 96813

*Via E-mail / fkraintz@honolulu.gov*

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krintz, AICP:

UNITE HERE Local 5 – a local labor organization representing 11,500 hotel, health care and food service workers throughout Hawaii would like to offer comments supporting the hundreds of Local 5 members and their families that reside in Nānākuli and the greater community of Waiʻanae moku to say no more landfills in our communities (Waiʻanae Communities Sustainable Communities Plan, 2012, 4-17).

According to the Center for Disease Control/National Center for Health Statistics Neighborhood Life Expectancy Project, our members and their families within 2 miles of the current PVT Landfill live 10 years less than the state average of 82 years. This is unacceptable and is symptomatic of a larger **public health crisis** in Nānākuli and Māʻili.

We ask that the Department of Planning and Permitting heed the voices of our community and support their efforts for a “clean and healthful environment.”

Please do not allow PVT to relocate to TMK: (1) 8-7-009:007. We support the relocation of the PVT Landfill to an isolated area that should and still needs to be identified and vetted in the 2.7 Alternatives to the Proposed Action in the Draft EIS.

Every community in Hawaiʻi as a matter of fairness and decency deserves a “clean and healthful environment” (HI State Constitution Article XI, Section 9; In re Maui Elec. Co., 2017 Haw.) PVT currently operates only 750 feet from residences. This buffer zone is not enough, no other landfill in Hawaiʻi is so close that within two miles of the landfill operations are numerous residences, schools, places of worship, parks, stores, medical clinics, and kūpuna housing that over 18,000 people daily live, work, and play.

Thank you.

*CC: Councilmember Kimberly Pine, Councilmember Ron Menor, Mayor Kirk Caldwell*

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***Draft EIS Comment Letters and Responses – Community Members - Individual Letters***

Douglas Cabinatan

Lily Cabinatan

David Carona

Kapela Eli

Victor Flint

Pohaikealoha George

Carmen Guzman

Azure Dee Paaluhi Kawelo

Kehaulani Kupihea

Alexis Lopez

Jan Makepa

Sanoë Marfil

Poni Napuelua

Aubrey Nera-Carvalho

Yumi O'Connell

Frances L. Paaluhi

Carol Pelekai

Hiram Respicio

Katja Keaokeaawailani Reyes-Lenchanko

Ileana Ruelas

Joseph Simpliciao

Rouel Velasco

Danielle Vo'a

Fa'afetai Jeff M. Vo'a

Leona Watson

Kamuela Werner

Whitney Wong and Gaison Adams

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January 10, 2020

Douglas Cabinatan  
c/o Lily Cabinatan  
nu\_health.wealth@yahoo.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Douglas Cabinatan:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about dust generated by PVT operations.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and

- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

PVT will continue to work with the Navy to address dust generated by truck traffic on Lualualei Naval Road.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

SEPT 5, 2019

MY NAME IS DOUGLAS CABINATAN, I AM A REGISTERED  
VOTER.

I AM AGAINST THE EXPANSION OF PVT LANDFILL.

PVT <sup>LANDFILL</sup> NEED TO ~~BE~~ SHUT DOWN OPERATIONS AND MOVE  
TO ANOTHER SITE AWAY FROM RESIDENTIAL COMMUNITIES.  
THE RESIDENTIAL COMMUNITY DIRECTLY BELOW PVT  
LANDFILL HAS SUFFERED ENOUGH FROM THE POISON  
DUST CREATED BY PVT LANDFILL. MY MOM AND DAD LIVED  
ON MARLON ST SINCE 1988, THEY BOTH HAS PASSED  
ON FROM RESPERTORY SICKNESS, THEY WERE IN THEIR  
MID SEVENTIES. YOU PEOPLE SHOULD CONDUCT A SURVEY  
OF THE PEOPLE THAT LIVE BELOW PVT LANDFILL,  
YOU WILL FIND MANY ARE SICK WITH RESPERTORY  
PROBLEMS. EVERYONE HAS THE RIGHT TO LIVE FREE  
WITH CLEAN AIR. PVT LANDFILL HAS TAKEN AWAY  
THAT RIGHT FROM THE COMMUNITY PEOPLE BY  
CREATING THE POISON DUST THAT BLOWS INTO THEIR  
HOMES 24/7 AND 365 DAYS X YEAR.

THANK YOU

Douglas Cabintan

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January 10, 2020

Lily Cabinatan  
[nu\\_health.wealth@yahoo.com](mailto:nu_health.wealth@yahoo.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Lily Cabinatan:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the types of waste accepted at the PVT ISWMF.

PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable Federal and State laws.

PVT currently accepts double-bagged Asbestos Containing Material (ACM). ACM disposal is regulated by Federal and State law and PVT's Solid Waste Management Permit. Special accounts and review procedures are required for customers proposing to dispose of ACM. The location of ACM is recorded and tracked using Global Positioning System (GPS) technology. PVT will continue to accept ACM at their existing facility until the ACM disposal area reaches capacity, at which time PVT will no longer accept ACM. No ACM disposal area is proposed for the relocation site.

PVT also accepts AES ash for beneficial uses. PVT primarily uses AES ash to prevent subsurface fires. AES ash is placed along the sides and on the top of the debris and then covered with soil. The AES ash is not left exposed on the landfill. The AES ash and soil form a barrier that prevents subsurface fires from starting and from spreading.

ACM and AES ash cannot leach out of the landfill. The landfill has a liner and leachate collection system that prevents any impact to groundwater. Based on the groundwater monitoring data collected since 2004, there have been no known releases of contaminants from the landfill to the environment.

The ACM and AES ash does not pose a risk to human health or the environment. The Hawaii Department of Health required PVT to have an independent expert conduct a human health risk assessment using EPA-approved methods. The human health risk assessment reports can be accessed on the PVT website - <http://www.pvtland.com/air-quality-studies/>. These studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive style with a large, stylized 'K' and 'B'.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Lily Cabinatan [nu\_health.wealth@yahoo.com]  
Sent: Thursday, September 05, 2019 10:25 PM  
To: Kraitz, Franz  
Subject: Testimony against expansion of PVT Landfill

Sept 5, 2019

Aloha, I am Lily Cabinatan a long time resident of the Waiaane Coast. I am writing to let you know that I am against the expansion of PVT Landfill.

I know for a fact that they are accepting highly poisonous materials like ash & asbestos which creates ill health for everyone. Please stop anymore landfills or expansions

Sent from my iPhone



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January 10, 2020

David Carona  
87-228 Halemaluhia Place  
Waianae, HI 96792

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear David Carona:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

1. EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristic* addresses potential impacts to current and future land uses in the vicinity of the Project Site, which includes agricultural uses. MA'O Organic Farms is specified as a future land use (Table 5-10 and Figure 5-9). The Proposed Action would be compatible with current and future land uses and is not expected to encourage or discourage changes in land use in the Waianae Region.
2. EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). The EIS considered alternatives and their environmental benefits, costs, and risks.

Alternatives considered in the EIS include alternative designs and technology, postponing the Proposed Action, and alternative locations. The EIS retained and evaluated the environmental benefits, costs and risks of the Proposed Action and No Action Alternative. Under the No Action Alternative, the City and County of Honolulu's (CCH) Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the CCH as possible locations for waste management and disposal. PVT considered the sites identified by the CCH for municipal solid waste (MSW) landfills as almost all of the siting criteria are the same for MSW and C&D landfills under State Law. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and

- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

The two City and County landfill siting studies are attached to the Final EIS as Appendix L.

3. EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for crops or grazing. As discussed in the EIS Section 6.2.2, *Special Use Permit: Unusual and Reasonable Criteria*, the Proposed Action meets the criteria for “unusual and reasonable use” of lands that are not suitable for agriculture and meets the criteria for requesting of a Special Use Permit. The EIS also considered the visual impacts of the Proposed Action. These are found in Section 5.4, *Visual Resources*.
4. PVT proposes to install a gasification unit or anaerobic digestion system. PVT is permitted by both their Conditional Use Permit and their Solid Waste Management Permit to install and operate a gasification unit in the Materials Recovery Device Area along the northern boundary of the existing PVT ISWMF property. It would utilize feedstock generated onsite. The 2019 ISWMP was not drafted by PVT and the reference to Campbell Industrial Park is in error.
5. PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area (beginning with Cell 10) of the Project Site, which complies with the CCH Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT’s current Solid Waste Management Permit.
6. See item #2 regarding the alternative location analysis.

It is anticipated that the current PVT landfill will reach capacity in approximately 7-12 years, depending on the economy and construction industry. In an emergency, hurricane, or other natural disaster, a large quantity of debris could be accepted and landfilled, which would shorten the life of the landfill. The permitting for the relocation is anticipated to take between 2-4 years. Initial construction to develop and prepare the site for debris acceptance is anticipated to take an additional 2-4 years (EIS Section 2.6.1, *Site Development and Relocation Schedule*).

7. Rainfall is not the only consideration in siting a landfill. See item #2 regarding the alternative location analysis.
8. EIS Section 3.4.2.3, *Leachate* describes PVT ISWMF’s Groundwater and Leachate Monitoring Plan, which is a requirement of the facility’s Solid Waste Management Permit. A copy of PVT’s Solid Waste Management Permit can be viewed here: [http://health.hawaii.gov/shwb/files/2013/06/PVT\\_PermittFinal\\_0511.pdf](http://health.hawaii.gov/shwb/files/2013/06/PVT_PermittFinal_0511.pdf). In accordance with the leachate monitoring program, leachate generated from landfill disposal cells are collected annually and tested for constituents listed in HAR 11-58.1-19(e)(2). Leachate monitoring data over the past twelve years indicate that the leachate does not pose an environmental or health concern. No analytes were detected above HDOH Environmental Action Levels. Once or twice a month a small quantity of leachate is mixed with a large quantity of water, which is sprayed on the landfill working face, too far from residential areas for overspray to occur.

9. See item #2 regarding the alternative location analysis.
10. See item #2 regarding the alternative location analysis.
11. As stated in the EIS Section 3.5.2.3, *Air Quality* the finding: "However, since most collected TSP masses were below the [Method Detection Limit] for the X-ray fluorescence method, longer sampling times are recommended in order to increase the sample size and more accurately quantify the concentrations of these airborne metals," was obtained from the report: Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, October – November 2010. As a direct result of this conclusion, a second sampling event and report was completed by Jim Morrow. The second study, Baseline Air Monitoring, PVT Land Company, Airborne Metals Analysis, May – June 2011, presents an analysis of two 5-day samples (Morrow 2011b). Samples were collected on normal facility operating days during the May 23, 2011 and June 21, 2011 period. Samplers were run continuously for five normal work days in order to collect sufficient mass on the filters to allow quantitative analysis of the metals present. The results are in Table 3-11. As stated in the conclusions of the report:
  - Chromium and lead were found "in the same concentration range as reported by the HDOH at Pearl City during the 2007–2009 period."
  - The other RCRA metals (arsenic, barium, cadmium, mercury, and selenium) were found "at 'zero' or 'non-detect' levels."
  - "These findings suggest that the PVT Land Company is not contributing to any unusual concentrations of RCRA metals in local air quality."
12. PVT will work with the Navy to address the repair and maintenance of Lualualei Naval Road.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

September 5, 2019

To: Franz Krintz, AICP  
Department of Planning and Permitting  
City and County of Honolulu  
650 S. King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

From: David Carona, Resident  
87-228 Halemaluhia Place  
Waianae, HI 96792

The following written testimony is submitted for the recorded in opposition of the Draft Environmental Impact Statement for the PVT Landfill 179 Acre landfill proposal in Nanakuli. I have submitted the below on the PVT website as well.

Bottom Line Up Front (BLUF):

PVT Draft Environmental Impact Statement (DEIS) is incomplete and does not effectively address alternative locations. Therefore, the City and County of Honolulu authorization offices should not accept this draft version as acceptable and disapprove any special use permits (SUP) until PVT provides alternate site data.

Issue Points:

1. The DEIS does not effectively address risk factors associated with landfill operations next to active agricultural farm. Ma'o farms will begin operations at TMK: 87-009-0020.
2. Nothing in the DEIS addresses alternate locations which were required to be considered by PVT as part of the DEIS. The City and County of Honolulu survey of several sites is specific to municipal waste in an effort to address Waimanalo Landfill future closure due to capacity. That studies criteria is specific for municipal landfills and does not specifically address impacts for construction/debris. Therefore it is illogical that PVT use this report as basis for their alternate sites.
3. By authorizing a SUP it essentially eliminates future farming/agricultural usage of this 179-acre parcel of land. Although PVT purchased this parcel with intent of future landfill operations, the City and County authorization offices should consider their current SUP authorizations. PVTs existing landfill operations accounts for 113 acres at a height of over 200 feet. This has changed the current landscape of Nanakuli. The size of the existing landfill dwarfs the surrounding area. DEIS suggests the new site height will exceed 200 feet further dwarfing the surrounding area.
4. PVT DEIS states installation of a Gasification Unit. However in the 2019 Integrated Solid Waste Management Plan (ISWMP) paragraph 4.3.12 states, "The PVT Landfill is planning

a new gasification facility (to be located in the Campbell Industrial Park) that would be able to burn feedstock, including material accepted at and recovered from the landfill, for energy production.” The creates inconsistency within their DEIS.

5. The DEIS states PVT will maintain a 750-foot buffer zone from residential properties. This equates to .14 miles (less than one quarter mile). The City and County authorization offices should not allow a SUP for a landfill in such close proximity to residential communities.
6. The 2019 ISWMP states at paragraph 8.3.5.1, “In its entirety, the PVT Landfill is not expected to reach capacity within the next 10 years.” A consistent statement throughout the DEIS, “No Alternative Option” exists. If the ISWMP indicates sufficient time still exists for PVT operations, then PVT should invest into alternate site vetting which differs from the City and County Municipal Landfill Location report.
7. PVT DEIS paragraph 2.5.3.1 for Leachate Management states, “A low volume of leachate is anticipated with the Proposed Action. C&D debris is characteristically dry, has little organic material, and produces significantly less and cleaner leachate compared to MSW. Further, the Project Site is in an area of low rainfall.” There are several other locations on the island of Oahu with similar to slightly higher precipitation. Therefore, alternate sites should be considered outside of Leeward Oahu. The City and County authorization offices should take the low volume of leachate into consideration and direct PVT to survey other sites.
8. Per the DEIS paragraph 2.5.3.1, “Leachate would be managed and retained onsite through a LCRS. The landfill would be graded to direct leachate toward the center of the landfill where it would be collected in perforated pipes. The leachate would be pumped to a holding tank and sprayed from a water truck for dust suppression. The leachate is tested regularly, as specified in PVT’s SWMP. Filtration or treatment is not needed.” There is no discussion within the DEIS when the leachate is tested, how it is tested, what federal, state, or city guidelines are used, and cannot guarantee overspray will not be happen due to atmospheric wind conditions. From Ma’ili driving towards Nanakuli, you can see the extremely large landfill landscape. From the top of the landfill you can see the spraying and dust move with the winds on a daily basis. In such close proximity to residential communities, PVT cannot guarantee control of their overspray of leachate.
9. Per the DEIS paragraph 2.5.3.1, “The impermeable liner prevents leachate from impacting the soils and groundwater beneath the liner.” Based on this statement and PVTs overzealous confidence in the impermeable liner, alternate locations when considered should have no immediate impact to a construction/demolition landfill. Therefore, the city and county authorization office’s should further require PVT to locate alternate locations outside of the leeward coast.

10. Per the DEIS paragraph 3.4.2.2, "PVT has been effective in controlling ground water intrusions." Therefore, it means PVT has the capability to do so in other locations and should be required to identify alternate locations and provide assessments for those areas before city and county authorization organizations consider Nanakuli.
11. Per the DEIS paragraph 3.5.2.3 Air Quality was last officially conducted in November 2009 – November 2010. Total suspended particles, "However, since most collected TSP masses were below the [Method Detection Limit] for the X-ray fluorescence method, longer sampling times are recommended in order to increase the sample size and more accurately quantify the concentrations of these airborne metals." There is no mention if this was addressed in the DEIS. Therefore, approval should not be given by the city and county.
12. Per the DEIS paragraph 4.1.3.1 Traffic Improvements, what is the State, City, and Navy going to do about this? PVT is a private company yet Lualualei Naval Road is deteriorating and in need of repair. Continued heavy usage of this road requires immediate repairs and should be a vetted considered requirement of the DEIS prior to granting any SUP for PVT expansion.

Final comment:

There are several instances where the DEIS is lacking. PVT has "put all its eggs in one basket" by purchasing this property and expecting the City and County of Honolulu to issue a SUP for the sake of ease. As a private company providing landfill services to Oahu, special consideration must be given to historical aspects of landfills on Oahu especially with regards to location. Leeward Oahu has absorbed its fair share of landfills since 1940 (Reference: State of Hawaii Department of Health Solid Waste Section Landfill Database – Oahu). If approved this would equate to 663 acres of landfill on the Leeward Coast from Waimanalo Gulch to Ka'ena Point. In the immediate area of PVT it would absorb a total of 292 acres (current PVT and future land area) of agricultural land of Nanakuli Ahupua'a. This essentially would make this land use no longer viable for agricultural use or any chance potential usage of the proposed 179 acre request.

A quote from Mayor Kirk Caldwell (11/27/2017 HawaiiNews Now Article), "There is no way, no way as mayor would I allow another landfill to be located on the west side. They carry enough burden as it is with Waimanalo Gulch."

I implore the leaders at the City and State levels to NOT allow a SUP for PVT. Make the hard choice and use alternative locations outside of the Leeward Coast.

Thank you.

Mr. David Carona



January 10, 2020

Kapela Eli  
kapela.kaulana@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Kapela Eli,

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Mahalo for sharing your knowledge and concern for the well-being of the Waianae, Lualualei, and Nanakuli communities. This letter addresses your comments related to the EIS.

1. A summary of the testimony at the Nanakuli-Mailii Neighborhood Board Meetings is provided in the Final EIS Section 5.3.2.4, *PVT ISWMF Social Characteristics*. The Final EIS Section 10, *Letters on the Draft EIS and Responses* includes written testimony from agencies and community members. It also includes the position letter from the Nanakuli-Mailii Neighborhood Board.
2. EIS Section 6.2.2.7, *Agricultural Productivity Ratings* included a discussion on the agricultural suitability of the Project Site based on four agricultural productivity assessments:
  - Important Agricultural Lands (IAL);
  - University of Hawaii Land Study Bureau (LSB);
  - Agricultural Lands of Importance in the State of Hawaii (ALISH); and
  - Land Capability Groupings by USDA.

The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for food or fuel crops.

EIS Section 5.1, *Archaeological and Historical Resources*, Section 5.2, *Cultural Resources*, and *Cultural Impact Assessment* (Appendix H) describe historic land uses on the Project Site. Cultural Surveys Hawaii completed the *Cultural Impact Assessment* and found no evidence of historic subsistence gathering of plant and aquatic resources or other agricultural production at the Project Site.

3. EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describes the cultural importance and potential impacts to Hina's Cave. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the

views among other culturally important landforms in Lualualei. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

4. The EIS does not state that there is no historic value to the land or that the Proposed Action would beneficially impact land value. The EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristics* addresses potential socioeconomic impacts and compatibility with existing and future land uses. The Proposed Action would continue to provide wages for up to 80 employees, tax revenue to the State and City and County of Honolulu, and economic benefits to Oahu. The Proposed Action would not impact existing or planned land uses within the vicinity of the Project Site and is not expected to encourage or discourage changes in land use in the Waianae Region. The Proposed Action would change the Project Site land use from vacant to a PVT ISWMF. There would be a loss of open space. When the facility is closed, the open space characteristics would be restored. The Proposed Action would not preclude future use as a recreational facility when the site reaches capacity and is closed.
5. All resource studies are presented in the Appendix of the EIS and are readily available on the PVT Website: <http://www.pvtland.com/draft-environmental-impact-statement/>. PVT complies with the applicable State and Federal regulations that govern waste management operations.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** Kapela Eli [<mailto:kapela.kaulana@gmail.com>]  
**Sent:** Friday, September 06, 2019 12:31 PM  
**To:** [oeqchawaii@doh.hawaii.gov](mailto:oeqchawaii@doh.hawaii.gov); Krantz, Franz; Neighborhood Commission Office  
**Cc:** [repgates@capitol.hawaii.gov](mailto:repgates@capitol.hawaii.gov); Sen Maile Shimabukuro; [repeli@capitol.hawaii.gov](mailto:repeli@capitol.hawaii.gov)  
**Subject:** 'A'OLE PVT: BE ADVISED OF CONTINUAL COMMUNITY OPPOSITION

*Wela i ka lā ē, wela i ka lā ē.  
Ua wela i ka lā ke kula o Lualualei  
Ua nau 'ia e ka lā ua 'oka'oka  
Ua hā'uile ka papa 'auwae o ka lā  
'O ka lā ē i nā kūkulu  
Na ka lā nō i kahu a 'ena'ena  
'A'ohē wahi ho'omaha a ka wāwae e ho'omaha aku ai  
I ka luna o Pōhākea  
E uē ho'i kāua ē*

The chant above was proclaimed at the moment that the goddess Hi'iakaikapoliopēle landed at the shores of Lualualei. As she looked out onto the pristine plains of the valley, in its vast beauty, she exclaimed of the scorching sun made so famous in Wai'anae stories. She described its unique nature as it shined blazingly upon the Lualualei plains. The kau or chant was one of 200 chants proclaimed by Hi'iaka through her travels across the Hawaiian pae 'āina from Hawai'i to Kaua'i and back to Kīlauea with Pele's lover Lohi'au. Hi'iaka's travels, her story and her chants have stood the test of time as a repository of place based knowledge for many significant places across Hawai'i. Her chants during her visit in Wai'anae is one of many Hawaiian language resources I use in my curriculum as a school teacher here in Nānākuli.

The story of Hi'iaka and her visit to Lualualei play a significant role in traditional Hawaiian knowledge and the connection to place and history for Wai'anae's people. Like many communities in this ever changing landscape, Hawaiian knowledge and history have been covered up and ignored for over 2 centuries. With the arrival of Captain Cook, white missionaries, American business and an illegal American government occupation of Hawai'i, the history, value and significance of Hawai'i's native culture and people has been ignored and disregarded for far too long. The issue of the PVT existence in our predominantly Hawaiian community proves that the State of Hawai'i, the County of Honolulu and the private interests of the PVT Land Company all point to the intentional Environmental Racism used to oppress and manipulate Hawaiian lands and our native community of Wai'anae-Lualualei-Nānākuli.

Last night, at the Nānākuli-Mā'ili Neighborhood Board Mtg, many kua'āina of Wai'anae, Lualualei and Nānākuli offered testimony expressing their physical, emotional and spiritual concerns regarding the impact of the PVT's presence and expansion here in Lualualei. We have heard about its devastating health impacts on the residents who live within 100 ft of the PVT borders. Others have shared about the past hurt and struggles that our community has faced over decades as our kupuna, makua and now keiki have protested the continued disregard of Wai'anae's needs by the State of Hawai'i, the County of Honolulu and the private companies who use our lands for their profits. Some argue against the intentional "erasure" of the Hawaiian people's history, culture and existence here in Lualualei in the PVT's EIS- a document created by and for the benefit of the PVT company and those who benefit from their money. All of these

issues are deeply engraved in the hearts and spirits of our community because we have had to bear the burden of O'ahu's 'ōpala for over 30 years.

Over the course of 1 month and through several community meetings, the Wai'anae-Lualualei-Nānākuli community has organized and demanded

#### FAILURE TO DISCLOSE TRUTH IN EIS

My statements below are addressed to the inconsistencies presented in the current proposal submitted by the PVT Land Company on January 10, 2019 to the Department of Environmental Quality. The current proposal includes the existing Environmental Impact Statement as well as some notes from the Cultural Impact Statement drafted by Cultural Surveys Hawai'i in 2007.

PVT's EIS, like the EIS statements of many private corporations who mismanage and misappropriate Hawaiian lands, discloses half truths and incomplete information which conveniently paints a picture that would benefit PVT and its allies. We are present to ensure that the other half of the picture, the half which includes our community, our people and our lives, will be included. I expand on historical evidence and current issues which reflect the position and perspective of many Wai'anae residents past and present.

**Agricultural Impact:** One major flaw in the EIS refers to the "unsuitable land" that PVT plans on expanding to. These lands have been zoned as agriculture land and PVT is attempting to circumvent that zoning in order to turn that 'āina into a dump. What you label as unsuitable, Hawaiians label as 'ĀINA-THAT WHICH FEEDS. As a beneficiary of DHHL trust lands, I challenge your perspective and understanding of the term "unsuitable to farm". Through the Hawaiian Homes Commission Act of 1921, Hawaiians were given lands for subsistence and homesteading. However much of the 'āina placed aside for native Hawaiian beneficiaries was barren, lacked access to water and was deemed "uninhabitable" or "unsuitable" for farming or subsistence. Very similar to this 175 acre parcel in your proposal. Kalama'ula, Moloka'i, Kahikinui, Maui, Maku'u, Hawai'i & even Nānākuli, O'ahu are all homestead lands historically deemed "uninhabitable and unsuitable for farming" however Hawaiians, with our immense knowledge of farming and our deep connection to land, have found ways to sustain and enrich our homesteads. My grandparents fed their 15 children and their extended family and neighbors with food, medicine and livestock grown on their "unsuitable to farm" homestead lot here in Nānākuli. Hawaiians have been turning "bad land" into prosperous land for centuries. How does land with "poor soil" and "no water" produce food? Through ALOHA 'ĀINA- a true love and commitment to care for and nurture that which feeds. The PVT company and its affiliates may not see potential in this 'āina, but DO NOT tell Hawaiians that our land is worth nothing more than a dump. It is insulting and hewa. We have been here, farming these lands for thousands of years. We plan on being here for thousands more!

**Cultural Impact:** The incomplete and half told story shared in the PVT EIS mentions the cave of Hina, mother to the Hawaiian Hero of Lualualei, Maui-Akalana. To outsiders who do not know and are not connected to this 'āina and its mo'olelo, her cave is merely a hole in a mountain that USED to be important thousands of years ago. In your EIS, it is a historical sight, one from the past, that shouldn't be overlooked but it is not THAT important. In your Cultural Impact segment of the EIS, Hina's cave earned a whopping 2 sentences! You mention that the cave is at 600 ft and your dump will only go to 250 ft. "Views of the cave will not be obstructed." What you fail to recognize is that we, the 'ōiwi of this kulāiwi, see more than a hole in a mountain. We see the womb of Hina and the place from which islands have been formed. We see the home of a

kupuna wahine whose role in our history includes the beating of the kapa which has clothed our people for thousands of years. She waxes and wanes the moon and gives us greater understanding of tides, farming and fishing. And most famously, from that “hole in the mountain” she sent her amazing son Maui to stop the sun in the sky so that our people could work our land, dry our fish and thrive here in Lualualei and throughout the Pacific. Without our tutu Hina, and her son, the Hawaiian people would fail to exist. So now, you come and you tell us that you want to build your dump in my tutu’s front yard? I say ‘a’ole. ‘A’ole loa!

Historical Impact: Lastly, I would like to bring light to your section on Historical Impact of the PVT landfill on our land. According to your studies (or at least what you chose to share), the land has little historical value and your actions would not bring down the value of the land. You even argue that you will bring greater value to the land by filling it with ‘ōpala. I’d like to compare your story to a personal story of mine.

Last year, I went to Target and I found trash cans on sale. It was a great price. Nice, shiny, brand spankin new. Hardly touched, never used. I bought 6 of em. I have a hoarding problem and when I see a deal, I gotta take it. Anyways, after bringing the brand new, clean cans home, I used 1 for trash. We fill it up every few days. When it overflows, we grab a new bag and fill it up again. I try to clean it and make it nice but it doesn’t work. 3 of the cans are used for my recycling system. Such a great cause right? And then I use the other 2 for laundry baskets. I found these dirt cheap cans, that are supposed to be for trash but I use it for whatever I need. Dirty clothes, rubbish, recylces. They are serving me very well. However there is 1 problem. If I take those once clean and new cans back to Target, with the receipt and maybe a letter of apology, you think they want those cans back? No. You think my ‘ōpala and responsible recycling practices matter to them? No. Those cans have been defiled and devalued simply because of HOW they have been used.

Our ‘āina is NOT YOUR TRASH CAN. It doesn’t matter how cheap of a deal you swindled. It doesn’t matter if you clean up and plant things. All that matters to us, is that you came, you dumped, you covered the ‘ōpala and you left with your pockets full and our ‘āina damaged. And our demand: leave our clean, unused, “unsuitable for farming” land to our community to use as we see fit. Wai‘anae has suffered long enough. Our ‘āina, our people, our lives, our health, our psyche, our emotional well-being, our hope has suffered long enough. We refuse to leave a legacy of ‘ŌPALA for our keiki to deal with. We refuse to leave a legacy of MONEY OVER LIFE to our grandchildren.

If you are met with anger and frustration, please understand why. You are faced with 1000’s of residents who have carried hurt and frustration for over 30 years and sadly 1000’s more who are not engaged because they have lost faith and trust in the government and systems put in place to “protect and serve” the people. The State of Hawai‘i, the City and County of Honolulu, State Legislators, American Military and private companies such as PVT have been left to mismanage, misappropriate and mislead our community for far too long. We’ve allowed others to convince us that MONEY is more important than LIFE. That MONEY is more important than HEALTH. That MONEY is more important than culture, history and the Hawaiian people.

We say ‘A’OLE. We say NO MORE. We say ENOUGH IS ENOUGH. We are here to ensure that our keiki and our mo‘opuna can grow and live in a healthier community where life, health, land ,history and culture is valued above \$\$\$ . As a lāhui and a community, we are galvanizing and rallying, organizing and working, committing and solidifying our connections to each other

and our ‘āina in order to make sure that these hewa are no longer allowed to take place. We are here to inform you that we are present and we are not silent. Our people have lost faith in the system put in place to serve and protect us but we’re gonna overcome this broken system. We will turn it right side up and restore the pono of our ‘āina and our people once again.

We oppose the operation or creation of any landfill in the Wai‘anae Moku-Nānākuli, Lualualei, Wai‘anae, Mākaha, Kea‘au, ‘Ōhikilolo, Mākua, Kahanahāiki and Keawa‘ula. PVT’s business, money and ‘ōpala is no longer welcomed.

E mau loa aku ke ea o ka ‘āina i ka pono.

Kapela Eli

Nānākuli & Wai‘anae, O‘ahu

January 10, 2020

Victor Flint  
[victor.m.flint@gmail.com](mailto:victor.m.flint@gmail.com)  
P.O. Box 1100  
Waianae, HI 96792

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Victor Flint,

Thank you for your letter regarding the PVT Integrated Solid Waste Management Facility Relocation Draft EIS.

We acknowledge that you support the PVT ISWMF Relocation project and PVT's ongoing contribution to Leeward Oahu's schools and activities.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



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From: Victor Flint [victor.m.flint@gmail.com]  
Sent: Thursday, September 05, 2019 8:37 PM  
To: Krantz, Franz  
Cc: Victor Flint; Carol Pelekai  
Subject: Support PVT Expansion

Hi Frank. This is Victor Flint from NAVFAC HI. I support the expansion of PVT Land Co. PVT has shown that they do things right as far as landfill management. Their award winning recycling program is a model of sustainability. They are a major contributor to our Leeward Schools & Activities. PVT is good stewards of our land & water. Thank You. Victor Flint PO Box 1100 Waianae, HI 96792

Sent from my iPhone

January 10, 2020

Pohaikaloha George  
gemstonecutesy@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Pohaikaloha George,

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

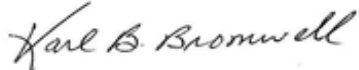
- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** Pohai George [<mailto:gemstonecutesy@gmail.com>]

**Sent:** Tuesday, August 27, 2019 11:52 AM

**To:** Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@capitol.hawaii.gov](mailto:repeli@capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov)

**Subject:** 'A'ole PVT

Aloha:

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole PVT in Nānākuli and Lualualei. Mahalo,

Pōhaikealoha George, Mākaha, HI

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January 10, 2020

Carmen Guzman  
[carmzz84@gmail.com](mailto:carmzz84@gmail.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Carmen Guzman,

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the impacts of the PVT ISWMF on public health.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

PVT will continue to work with the Navy to address dust generated on Lualualei Naval Road. There would be no increase in traffic for the Proposed Action relative to the existing ISWMF traffic. Adherence to posted speed limits both on- and off-site is a top priority. PVT encourages community members to call their office to report speeding trucks. PVT penalizes speeding drivers and will suspend repeat offenders from the site, if necessary.

We are not familiar with the 2010 plan you reference. It may be Honua's plan to use feedstock generated by PVT in Campbell Industrial Park. It has never been PVT's plan to own or operate a facility in Campbell Industrial Park.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



**From:** Carmen Guzman [<mailto:carmzz84@gmail.com>]

**Sent:** Wednesday, August 21, 2019 4:36 PM

**To:** Krantz, Franz

**Subject:** Oppose to 2nd PVT SITE NANAKULI

The health and safety of the people of Nanakuli should be first priority. We have Kupuna (elders), Keiki (children), and other Ohana (family) that are sick directly related to landfill pollution, dust, debris, asbestos, and other harmful chemicals. This pollution is flowing into Hale (homes) and into the air. After already having the existing landfill here in Nanakuli for ~35 years the Kanaka Maoli (people) and the Aina (land) is getting affected. Having hundreds of huge dump trucks & heavy duty machinery coming down Farrington Hwy & into our residential neighborhoods daily has caused damages lessening our life expectancy by 10 years. Aole PVT, relocate your new site into Campbell Industrial per your Sept 2, 2010 plan.

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January 10, 2020

Azure Dee Paaluhi Kawelo  
Ka Waihona o ka Na`auao, Public Charter School  
89-195 Farrington Highway  
Wai`anae, Hawai`i 96792  
[mkawelo@kawaihonapcs.org](mailto:mkawelo@kawaihonapcs.org)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Azure Dee Paaluhi Kawelo,

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

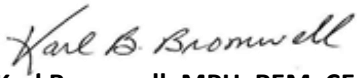
- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;

- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

From: Momi Kawelo [mkawelo@kawaihonapcs.org]  
Sent: Friday, September 06, 2019 10:59 PM  
To: Krantz, Franz; [steve@pvtland.com](mailto:steve@pvtland.com); [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)  
Subject: Testimony on PVT- Nānākuli

Aloha e!  
Attached is my testimony.  
Mahalo-

Me ka mahalo piha,

Momi Kawelo

Ka Waihona o ka Na`auao, Public Charter School  
89-195 Farrington Highway  
Wai`anae, Hawai`i 96792  
Phone : (808) 620-9030  
Fax : (808) 620-9036

‘A’ohe pau ka ‘ike i ka hālau ho’okahi.  
All knowledge is not learned in just one school.

Aloha e!

Sept. 5, 2019

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences.

Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole PVT in Nānākuli and Lualualei.

Mahalo,

Azure Dee Paaluhi Kawelo, Nānākuli

January 10, 2020

Kehaulani Kupihea  
kehaus@hawaii.edu

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Kehaulani Kupihea:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about potential impacts to Hina's cave and public health.

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (Appendix H) describes the cultural importance and potential impacts to Hina's Cave. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The Cultural Impact Analysis recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. From your comment, we do not know what 2007 CIA concerns were not addressed in the current CIA. The current CIA discusses potential impacts to Hina's Cave from the Proposed Project. The 2007 CIA addressed a different project.

Additionally, the EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;



- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Kehaulani Kupaheha [kehaus@hawaii.edu]

Sent: Friday, September 06, 2019 8:38 PM

To: Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; Rep. Stacelynn Eli; Senator Maile Shimabukuro; State Land Use Commission; State Department of Health Solid Waste-Management Division; President Prince Kūhiō Hawaiian Civic Club

Subject: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007 Aloha Mr. Franz Krintz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli. This relocation is a direct Cultural Impact to the "Cave of Hina" one of our most sacred sites on Pu'u Heleakalā. The current EIS is incompliant because the current Cultural Impact Assessment (CIA) did not address the documented concerns in the 2007 (CIA) impact on Hina's cave.

I strongly oppose the operation or creation of any landfill in Nānākuli and Lualualei. I have two aunties who live 2 blocks down from the current area and they both were diagnosed with breast cancer. Recently one of them has cancer for the third time called plasma cancer, she is now fighting for her life. I respectfully request that PVT be required to relocate its landfill to an isolated area.

There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Every day, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely.

Further, there has never been an independent study clarifying how the PVT landfills do not pose a threat to public health, given the wealth of public health studies on the adverse health effects of landfills in general and construction & demolition landfills in specific and the numerous kama'āina testimony about those health concerns. I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. Let us seek pono by taking steps toward environmental and health justice for our communities.

Mahalo,

Kēhaulani Kupaheha

--

Kēhaulani Kupaheha

The Future is in the Past  
Ho'ōla Mokauea

Follow your bliss and the universe will open doors where there were only walls.<<http://www.brainyquote.com/quotes/quotes/j/josephcamp134756.html>>  
Joseph Campbell<<http://www.brainyquote.com/quotes/quotes/j/josephcamp134756.html>>

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January 10, 2020

Alexis Lopez  
[lopezaj@hawaii.edu](mailto:lopezaj@hawaii.edu)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Alexis Lopez:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas, potential impacts on traffic and health, and the loss of agricultural land.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

EIS Section 4.1, *Transportation* discusses potential impacts to traffic. PVT is currently permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day, PVT does not propose to increase these limits. The Traffic Management Consultant prepared a *Traffic Impact Assessment Report* for the Proposed Action, which was included as Appendix F to the EIS. The Report indicated minimal impact from the Proposed Action and no further traffic access or impact studies were warranted.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;

- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for food or fuel crops. The Proposed Action meets the criteria for "unusual and reasonable use" of lands that are not suitable for agriculture.

Lastly, the EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

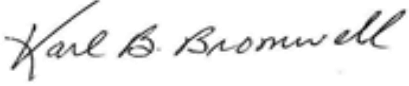
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

09/06/19

Aloha,

This is my testimony I Alexis Lopez oppose the operation or creation of any landfill in Nānākuli, Lualualei and all along the entire Leeward Coast land no less of a 4 mile distance from residential and commercial areas. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences and a two mile distance from commercial areas, plus it's the only one in Hawai'i currently near or in the backyards of residential sites which is why it should be relocated further away to avoid any health concerns, any inconveniences to the residents and/or visitor's and any potential Vehicle Collisions. If we look into the statistics of just from Nānākuli to Wai'anāe alone there have been over (8) eight incidents just today (4) four of which were Motor Vehicle Collisions in one day which I found in the HPD Traffic Public website [<http://www11.honolulu.gov/hpdtraffic/>], could you imagine the amount of collisions that could occur in a week, six months or within a year? The roads are small and very busy and we all need to get to and from our families, our schools and our businesses safely and in a timely manner.

Should PVT relocate it could benefit not only the residents but the workers as well they wouldn't need to feel overwhelmed by the thought of collisions, or pressured by being on time on-site because they're stuck in traffic with the rest of us. If you think about it, this could reduce traffic congestion not saying that PVT is the cause of it but I am saying that by relocating, PVT could be contributing to show people how much they care and want to help residents fix this problem in the one major way they can which would be beneficial to all of us including PVT. The relocation of the Landfill could actually improve PVT work-load by increasing drop-off times, creating more opportunities for their business to grow by cutting down their travel time, less traffic for them means more time for their employees to get well rested and bonus! This will allow the land, the residents, the workers or well everyone to heal and replenish.

In my opinion, the PVT Landfill should be placed somewhere that would be more convenient and beneficial for those that use it where it is safe for everyone and far away from all residential and commercial areas. As stated in the website [<http://lrbhawaii.org/con/conart11.html>] within the Agricultural Lands in the Hawaii State Const. Article XI, Section 3. **“The State shall conserve and protect agricultural lands, promote**



**diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands. The legislature shall provide standards and criteria to accomplish the foregoing. Lands identified by the State as important agricultural lands needed to fulfill the purposes above shall not be reclassified by the State or rezoned by its political subdivisions without meeting the standards and criteria established by the legislature and approved by a two-thirds vote of the body responsible for the reclassification or rezoning action. [Add Const Con 1978 and election Nov 7, 1978].” And the Environmental Rights in the Hawaii State Const. Article XI, Section 9. “Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulation as provided by law. [Add Const Con 1978 and election Nov 7, 1978].”** With that in mind, please help us help you to help us let’s break the chain and start our own change there is a common ground a way for us all to be on the same side so all I ask is to relocate PVT to a more secluded area please be the leaders we need now by serving and protecting Hawaii People and Hawaii lands, do not wait until it's too late.

Respectfully,

Alexis Lopez, Wai`anae Resident

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January 10, 2020

Jan Makepa  
jmakepa808@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Jan Makepa:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

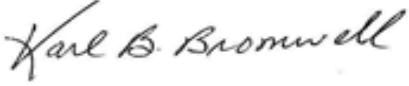
The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** Jan Makepa [<mailto:jmakepa808@gmail.com>]

**Sent:** Wednesday, August 21, 2019 5:44 PM

**To:** Krantz, Franz

**Subject:** PVT Landfill Expansion

Aloha,

I am writing in OPPOSITION of the expansion of PVT Landfill. The landfill has been operating for 34 years already! Our community has had enough of being the islands dumping ground for EVERYTHING.

I am DEMANDING that their SUP major NOT be approved due to the communities outcry of not wanting it our back yard.

I am also DEMANDING that the City and State do their jobs and look for an alternate site outside of the Wai'anāe Coast.

Just because PVT is the affiliated landowner, and just because the company helps the City and State from not having to charge tax payers because of this private service DOES NOT constitute the okay to approve all permits required to expand and operate.

And just because PVT has followed all protocol in drafting and eventually submitting their EIS, does not mean it should be approved.

DO NOT pass the buck because it's the easy thing to do. Be pono and do what's right not what's easy.

Mahalo,

Jan Makepa

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January 10, 2020

Sanoe Marfil  
sanoemarfil@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Sanoe Marfil:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the impacts of the PVT ISWMF on public health and cultural practices.

EIS Section 3.5, *Air Quality* summarizes the project-specific *Air Quality Impact Report* (Appendix B) and nine other air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.



The *Cultural Impact Assessment* (CIA) (Appendix H) developed by Cultural Surveys Hawaii (CSH) is summarized in EIS Section 5.2, *Cultural Resources*. The CIA acknowledges the link between culture knowledge and positive educational outcomes. The Project Site lies in the vicinity of culturally significant sites, including Puu Heleakala (Hina's Cave), Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. CSH (2019) recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**

Principal Environmental Scientist

Hart Crowser, Inc.

**From:** Sanoe Marfil <[sanoemarfil@gmail.com](mailto:sanoemarfil@gmail.com)>  
**Sent:** Wednesday, September 4, 2019 11:12:05 AM  
**To:** Karl Bromwell <[karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)>  
**Subject:** 'A'ole PVT Expansion

Aloha,

I am from Nanakuli and live on homestead land.

I OPPOSE the PVT relocation in Lualualei as proposed in the draft EIS.

There is a public health crisis in Nanakuli and the greater Waianae moku.

According to the National Center for Health Statistics, our 'ohana live 10 years less than the state average of 82 years.

There is also a great need for our keiki to be grounded in cultural knowledge. According to S. Kanaiaupuni, Culture Based Education (CBE) positively impacts student socio-emotional well-being (e.g., identity, self-efficacy, social relationships). Second, enhanced socio-emotional well-being, in turn, positively affects math and reading test scores. Third, CBE is positively related to math and reading test scores for all students, and particularly for those with low socioemotional development, most notably when supported by overall CBE use within the school.

Again, if I am thinking about the long-term effects of our community, education cannot be secondary to the business investments and gains. We need to think about our Keiki.

'A'ole PVT- no more landfills in our community.

Sanoe Marfil  
Nanakui Homestead

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January 10, 2020

Poni Napuelua  
[hakaleleponi@gmail.com](mailto:hakaleleponi@gmail.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Poni Napuelua:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on Hina's Cave and public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

PVT does not burn waste at the ISWMF.

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describes the cultural importance and potential impacts to Hina's Cave. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

Aloha,

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Every day, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. The proposed expansion would obstruct, desecrate, and destroy the cave that is there in the mountain, which is "Hina's Cave" that is where she dwelled, gave birth to, and raised Mauiakalana. It can be seen from Farrington Hwy in the back of the smoke from the burning opala. PVT expansion will eventually destroy a place of great cultural importance. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole PVT in Nānākuli and Lualualei.

Mahalo,

Poni Napuelua  
Resident of Wai'anāe

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January 10, 2020

Aubrey Nera-Carvalho  
nera5462@pacificu.edu

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Aubrey Nera-Carvalho:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Nera, Aubrey [nera5462@pacificu.edu]  
Sent: Friday, September 06, 2019 8:28 PM  
To: Krantz, Franz  
Subject: PVT and Nānākuli

Aloha,

I oppose the operation and/or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT landfills to the nearest residents. My parents home & my brother's home is on Helelua Street. The proposed site will be very close to their residence. I'm concerned about the proximity in particular. My mother and two of my brother's children have respiratory issues. I'm worried that with PVT being so close, their symptoms will become more severe.

Everyday, thousands of community members and residents will be affected. There are five schools, two grocery stores, a medical clinic, kūpuna housing, restaurants, and parks all within two miles of the proposed site.

Can you tell me if there has been any independent studies, determining the landfill will not have adverse affects on the community members? Will the screens PVT is promising to put up capture and prevent dust and other debris from entering my parents residence? Will it prevent particles from entering my brother's residence?

I am not against PVT, but I am against PVT being so close to residential dwellings. Please consider moving the proposed site. Everyone should have a clean and healthful environment. I believe there should be at least four miles between a landfill and the community.

Mahalo for your time and consideration.

Aubrey Nera-Carvalho  
Helelua  
Nānākuli

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January 10, 2020

Yumi O'Connell  
87-104 Kipaoa Place  
Nanakuli, HI 96792  
yumio1222@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Yumi O'Connell:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:


- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**Yumi O'Connell**

87-104 Kipaoa Pl \* Nanakuli, HI 96792  
Phone: 808-375-5615 \* [yumio1222@gmail.com](mailto:yumio1222@gmail.com)

September 2, 2019

City and County of Honolulu  
Planning and Permitting  
Frank Kraintz  
650 S. King St.  
Honolulu, HI 96813

RE: PVT Landfill

Dear Mr Frank Kraintz,

My name is Yumi O'Connell and a resident of Nanakuli and strongly oppose the expansion and continuation of the Landfill in Nanakuli. Nanakuli and our Leeward community has beared the burden of our entire island's opala for almost 35 years! We will not stand for another 35-40 years of additional exposure to these potentially hazardous carcinogens in the form of construction debris and toxins, right in our back yards! I have lived in this subdivision below PVT for most of my 51 yrs! There has been 4 generation of my family living in this home since the development of this subdivision. PVT wants to continue to expose my family and neighbors for 35 more years?!! No matter how much money, scholarships, and donations are made, it is not worth risking all of our healths! The land fill is not miles away from homes but just a few short yards. Our health and quality of life for our kupuna, keiki and moopuna is NOT for sale!

According to the US Census, our Westside community already has a low life expectancy of 74yrs compared to 82yrs average for our entire state. With so much health disparities in our community why compound that with the added health stressors or component of lessened air, water and land quality that a landfill so close to homes creates? Come on, ENOUGH already! Find another site far away from homes outside of Waianae.

Respectfully Submitted,  
Yumi O'Connell



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January 10, 2020

Francis L. Paaluhi  
[paaluhi91@gmail.com](mailto:paaluhi91@gmail.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Francis L. Paaluhi:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:


- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

August 20, 2019

Aloha Kākou:

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9).

From where I work near Farrington Highway in Nānākuli, I can see the huge dust cloud that is generated by PVT's bulldozers. I always worry of the possible danger to our air quality this action poses to our community, especially to the residents who live right next to the landfill. The dust screens you have erected around the landfill does not stop or limit the amount of dust that enters the homes of the adjoining properties. No community should suffer having a landfill in their back yard. There should be at least 4-miles between a community and a landfill. PVT was allowed to do business in our community for far-to-long; ENOUGH IS ENOUGH! Go find another place to dump your hazardous material. 'A'ole PVT in Nānākuli and Lualualei!

Mahalo,



Frances L. Paaluhi, Nānākuli

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January 10, 2020

Carol Pelekai  
[Cpele711@aol.com](mailto:Cpele711@aol.com)  
808-285-3023

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Carol Pelekai:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you support the PVT ISWMF Relocation project and PVT's ongoing contribution to the Waianae Coast community.

PVT will continue to work with the Waianae Coast community to address concerns related to the proposed relocation and ongoing PVT ISWMF operations.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: [cpele711@aol.com](mailto:cpele711@aol.com) [cpele711@aol.com]  
Sent: Thursday, September 05, 2019 10:33 PM  
To: Krantz, Franz  
Cc: [pvtland.com/comments-2/@aol.com](mailto:pvtland.com/comments-2/@aol.com); [Victor.M.Flint@navy.mil](mailto:Victor.M.Flint@navy.mil)  
Subject: Testimony for PVT

i am writing to testify for the favor of PVT. i live in Nanakuli Homestead and have been helping the community for over 25 years.

In the past PVT was not liked by many because of the dust and loud noise at night. In the past 10-12 years it has changed and there is no major complaint from the people in the nearby area. PVT has worked on making things Pono with the community and has worked with supporting the youth and community groups in many ways. PVT has supported the Waianae Economic Development Council and Made on the Waianae Coast small businesses and services. Supporting the Made on the Waianae Christmas Festival and Winter wonderland for our children and youth the past 3 years.

I think there should be a way for PVT and the community to work together to find a solution to making things pono. We do not want anymore landfills in our community to add on to what we have. I suggest that there be a working committee to create a great solution. In our Hawaiian culture we have a method for resolution called "Hooponopono". This is where both parties involvted say what is bothering them or what is their issues(only 1 person talks at a time) then after they say what they think each comes out with a resolution on what they would do to help make the change for the betterment of both parties.

If we can do this we can help to make our community much stronger and united.  
I would like to see PVT be part of the community and everyone wins.  
Mahalo.

Carol Pelekai  
[cpele711@aol.com](mailto:cpele711@aol.com)  
phone 285-3023.



January 10, 2020

Hiram Respicio  
[iograpes@yahoo.com](mailto:iograpes@yahoo.com)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Hiram Respicio:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about potential impacts on public health, fugitive dust, hazardous wastes, traffic, and biological resources.

1. The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.
2. PVT would implement dust control measures to minimize fugitive dust. PVT has seven water trucks with capacities of 4,000 gallons. Dust control measures would include:
  - pave and regularly clean permanent access and haul roads;
  - apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
  - apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
  - landscape closed portions of the landfill area;
  - apply soil cement to unused portions of the landfill area;
  - maintain a 750-foot buffer zone along the southern property boundary;
  - install a dust screen along the southern property boundary;
  - maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
  - install and maintain a wheel wash to clean the tires of trucks leaving the site; and

- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.
- 3. PVT does not accept hazardous wastes, as defined by State and Federal regulation. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable State and Federal laws.
- 4. EIS Section 4.1, *Transportation* discusses potential impacts to traffic. PVT is currently permitted by their Solid Waste Management Permit to accept up to 300 haul trucks per day, PVT does not propose to increase these limits. The Traffic Management Consultant prepared a *Traffic Impact Assessment Report* for the Proposed Action, which was included as Appendix F to the EIS. The Report indicated minimal impact from the Proposed Action and no further traffic access or impact studies were warranted.
- 5. EIS Section 3.7, Biological Surveys discusses potential impacts to botanical, avian, and terrestrial mammalian surveys of the project site. The Biological Surveys Report (Appendix E) summarizes the findings of a biological surveys conducted at or in the vicinity of the Project Site, including four faunal surveys conducted by Reginald David in 2004, 2007, 2008 and 2018 and four botanical surveys conducted by Eric Guinther in 1992, 2003, 2007, and 2018. The report concluded that the Proposed Action is not anticipated to have impacts on plant, avian, or mammalian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes.

One plant species was observed during the survey that is included on the State of Hawaii Species of Greatest Conservation Need: mao or Hawaiian cotton (*Gossypium tomentosum*). Mao is an endemic shrub but is not a listed species. The species was not found in abundance at the Project Site.

There are no anticipated impacts on avian species including the endemic Short-eared Owl (*Asio flammeus sandwichensis*). The State-listed species has been recorded within the greater Lualualei area but was not observed at the Project Site. Although it is improbable that the Project Site habitat could be used for Short-eared Owls nesting, a qualified biologist will conduct a nesting Short-eared Owl survey of the Project Site immediately prior to clearing and grading.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

Written Testimony can be submitted by writing below, folding, adding a stamp and submitting to the reverse address.  
You may also email: [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov) and cc: [pvtland.com/comments-2/](http://pvtland.com/comments-2/) to submit your comments.

**Comment deadline is September 6, 2019.**

My name is Hiram Respicio, I am a resident of Nānākuli for over 41 years, I have lived in the Kahe Kai Condos since 1989. I am against the PVT Landfill facility expansion and their request for a Conditional Use Permit from the City and County of Honolulu because, my family and I have lived with PVT for over 30 years, enduring their dust that flies into the air and disipates over the whole of Nānākuli, I have to clean my living room table of dust everyday, my living room faces their site, so how can their claims from PVT's Operations Vice-President, Stephen Joseph say "there's more dust in other communities from heavy car traffic than neighborhoods near PVT."

PVT intends to install screens, please don't fall for this deception, "intends" doesn't mean that they're going to do it, and this will not resolve this problem because their property encompasses many acres of land and no matter how much they water their landfill will dry up what watering they do due to evaporation. How many water trucks do they have? How many water truck will be required to saturate a landfill of this size?

Let's not rush into approving PVT's Landfill Facility expansion, see if they have the reasonable answers to the many questions you and the community has about their request.

First of All, PVT's draft EIS has to be reviewed, it has too many inconsistencies. Traffic, Dust, Air Pollution, and Noise Pollution, not to mention hazzardous waste. How Is the State of Hawaii, City and County of Honolulu, and the Federal Government-U.S. Navy jurisdiction of the access to and from PVT Landfill (Lualualei Naval Road) going to handle the increase truck traffic and the conflict with the Pacific Shopping Center since this is the only left-hand turn out of their privite property and onto Farrington Highway?

I testified at Wedsnesday's meeting at Nānākuli High School about a rare hawaiian plant called the Ma'o, Hawaiians use this plant in tapa dies, this plant grows above the Helelua Street site in the open field. This is the only site were this plant grows, it would be a shame if this site is turn over into a dump.

Second, Hawaiian owls roam this area for food, this bird lives in the caves above the expansion site, it's home is 'Puu Heleakala' which rises over 1500 feet in this Ahupuaa. Owls control the rats and the mongoose population in this open-field area and is close to populated areas in Nānākuli.

In conclusion, this is not the proper time to approve PVT's request for a 'Conditional Use Permit.' I would rather have the City Council make appropriate steps toward funding another site to exclude Nānākuli. It was noted that PVT's Operations Vice-President, Stephen Joseph said, "roughly estimates remaining capacity at about seven years," so let's work finding a solution and leave the Nānākuli community in peace.

signed,

Hiram Respicio, property owner-Nānākuli resident



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January 10, 2020

Katja Keaokeaawailani Reyes-Lenchanko  
41-1658 Kumuniu Street  
Waimanalo, HI 96795  
keaokearl@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Katja Keaokeaawailani Reyes-Lenchanko:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;

- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** 'EIS Comments'

**Sent:** Monday, August 26, 2019 6:58:22 PM (UTC-10:00) Hawaii

**To:** EIS Comments

**Subject:** EIS Comments

Name	Katja Keaokeaawailani Reyes-Lenchanko
Address	41-1658 Kumuniu St.
City	Waimanalo
State	HI
E-mail	<a href="mailto:keaokearl@gmail.com">keaokearl@gmail.com</a>
Comment	<p>Mai ke kuahiwi nani 'o Waimanalo a i ka mauna ki'eki'e 'o Ka'ala aloha mai kākou,</p> <p>'O Keaokeaawailani ko'u inoa and I oppose the operation or creation of any landfill in Nānākuli and Lualualei. Although I may not reside in Nānākuli, this is part of the home and Ahupua'a where I grew up. Home of my 'ohana Lenchanko for 3 generations, who currently resides in Wai'anae Valley. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole PVT in Nānākuli and Lualualei.</p> <p>Me ka leo ha'aha'a,</p> <p>Katja Keaokeaawailani Reyes-Lenchanko</p>



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January 10, 2020

Ileana Haunani Ruelas  
Ileanahaunani@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Ileana Haunani Ruelas:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Technological Alternatives for Waste Management:

Initially, in the 1990's, 100% of the C&D waste received at PVT was landfilled. Today, the PVT facility is not just a landfill, it is an Integrated Solid Waste Management Facility, meaning it reduces the volume of waste that needs to be landfilled onsite. Approximately 80% of the C&D debris currently received at PVT ISWMF is reused or recycled using state-of-the-art materials sorting equipment. PVT is the State's largest recycler by weight. PVT would continue to explore and prioritize technology alternatives to landfilling.

PVT's commitment to using effective technologies and processes in system design and operations, advancing worker and community health and safety, and implementing successful public education and outreach programs are recognized at the national level. PVT was awarded the Solid Waste Association of North America (SWANA) Gold Excellence Award in the Landfill Management category in 2018 (SWANA 2018). SWANA's Excellence Awards Program recognizes outstanding solid waste programs and facilities that advance the practice of environmentally and economically sound solid waste management.

Cumulative Impacts:

Each resource section of the EIS explores potential long-term, short-term, direct and indirect impacts of the proposed relocation. Section 7, *Cumulative Impacts* assesses Cumulative Impacts, which result from the incremental effects of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. The Proposed Action would not have a substantial cumulative adverse effect on the environment.

Wildfires at the surface will not cause subsurface fires of debris. Subsurface fires are prevented by the fire barriers in the landfill, including the asbestos area. Asbestos containing material will not be accepted at the relocation site.

EIS Section 2.5.3.3, *Stormwater Management (Site-wide)* describes best management practices (BMP) for stormwater management to minimize the impact of the Proposed Action to the area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. This water has not come into contact with landfill debris.

#### Landfill Closure:

Post-closure care of the Phases I/II landfill is the responsibility of PVT for up to a 30-year period and would be in accordance with the Hawaii Department of Health approved PVT *Closure/Post-Closure Plan*, per its Solid Waste Management Permit. Post-closure activities include monitoring and maintenance of the landfill final cover and stormwater management systems, leachate collection and removal system operation, and groundwater monitoring. The Hawaii Department of Health requires that the integrity of the landfill cover be maintained during the post-closure period. Vegetative growth that may penetrate the cover is not permitted on the closed landfill. The closed PVT ISWMF would be maintained as open space during the post-closure period. PVT would work with the community through the neighborhood board process to explore potential post-closure land use options for the closed ISWMF.

#### Alternative Locations:

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal.

The 2012 and 2017 CCH siting studies evaluated the same 11 sites using different criterion:

- 2012 Study - Table 2-5 MACLSS Community-Based Criterion shows the list of 19 criterion used by the City and County of Honolulu to evaluate and rank the 11 sites. The numbers referenced in your comment are not rankings, but a weighting factor, which were given to each criterion to assign it a lighter (e.g. 1), or heavier (e.g. 10), importance in the analysis.
- 2017 Study - The CCH ENV re-evaluated the 11 sites identified in the 2012 MACLSS report against technical and logistical criteria developed to measure each site's feasibility, cost effectiveness, and functionality to serve as a future landfill location. This evaluation provided a ranking based on a different focus from that of the previous community-based ranking of the MACLSS. Six criteria: landfill lifespan, site development cost, roadway improvement cost, access road requirement, location relative to H-POWER, and acquisition were developed. For each criterion, a score was assigned to each site that measured that site's suitability to meet that criterion when compared against the other sites. All criteria were weighted equally.

The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

#### Cultural Resources:

Cultural Surveys Hawaii prepared a *Cultural Impact Assessment* for the Proposed Action, which was included as Appendix H to the EIS. No traditional cultural places, properties, or practices were identified at the Project Site. Section 5.2., *Cultural Resources* discusses the cultural history of the Project Site and

potential impacts of the Proposed Action on cultural resources. Three historic properties were identified at the Project Site but are located outside of the development area.

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describes potential impacts to cultural resources. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA did not find no evidence of traditional cultural practices at the Project Site. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

Summary of Impacts:

The EIS includes a Project Summary table at the beginning of the document that summarizes the findings of the EIS.

Each resource section also includes a summary of findings entitled *Summary of Impacts and Potential Mitigation*. This text serves as a simple summary of condensed findings of impacts for ease.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in cursive script that reads "Karl B. Bromwell".

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Ileana Haunani Ruelas [ileanahaunani@gmail.com]

Sent: Friday, September 06, 2019 6:59 AM

To: Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; Rep. Stacelynn Eli; Senator Maile Shimabukuro; State Land Use Commission; State Department of Health Solid Waste-Management Division; President Prince Kūhiō Hawaiian Civic Club  
Subject: Testimony & Comments on EIS - PVT Landfill Expansion

Aloha mai,

My name is Ileana Ruelas. My family has lived in Waianae for 5 generations.

I am opposed to the PVT landfill expansion.

Key comments for consideration regarding the EIS include the following:

- PVT Landfill Expansion should not happen without a parallel executed plan of researching, resourcing, development, and prioritization of technology alternatives for waste management
- EIS does not provide adequate information on the possible impacts of interactions between individually reported impact areas (i.e. wildlife hazards, various substances being dumped and fire risk impact, etc.)
- EIS does not adequately address the problem of Landfill Closure – and it's commitment to continue monitoring impacts on community health and mitigation measures for dust/fire etc
- EIS provides an inadequate evaluation of alternative sites based on a flawed rating system
- EIS does not address impacts to cultural sites present in the Landfill Expansion area
- EIS presentation does not provide a simple summary of condensed findings of impact for ease of community engagement and comprehension of materials provided

Each of these considerations are outlined below.

#### Urgent Need to Prioritize & Resource Technology Alternatives

If Hawaii's economic plans will continue to include intensive construction, and our state will continue its committed investment in construction projects to address the growing population's housing needs -then an equally proportionate amount of resources needs to be committed to:

- the exploration/creation of alternative technologies to eliminate the need for a C&D landfill,
- the development of greater efficiencies/policies/practices around mandating re-use of materials

- and proactively address the ever shrinking opportunities for landfill sites in a way that honors aia and community well being - and considers impacts on habitat/whole ecosystems

In short landfill expansion – should not be permitted - unless an equal commitment to addressing the root sources of our waste problem has addressed at least 50% or greater amounts of the waste that is being created. Expansion of a landfill – will perpetuate the attitude of “passing the buck” to the next generation to resolve problems due to over-consumption issues, and development that does not consider the impact of these projects on the whole well being of a community. If landfill sites are ever shrinking – we must begin the process of prioritizing research and development and innovation to produce zero waste solutions. Necessity is the mother of invention

EIS Does Not Provide Adequate Information on Possible Impacts from Interactions Between Individually Reported Impact Areas (i.e. Wildlife Hazards, Toxic Substances, Missing Information on Community Impact)

The EIS provides an individual analysis of the impact of wildfire hazards, and a separate compartmentalized analysis of the impact of substances that would be disposed there, a separate analysis on hazards impacting the community, and a separate analysis of run off probability. But it does not consider the possible impacts of logical interactions between these individually reported impact areas.

The Project site has a high risk of Wildfire Hazards (p. 3-18) – yet there is no information on the impact of potential fire on the substances that will be disposed there. For example, one of the allowed substances includes “asbestos-containing material (ACM) (double-bagged, up to 500 tons per week)”. While asbestos is fireproof and durable – and generally considered safe when left undisturbed – this substance is hazardous. If asbestos material is double bagged - it is highly unlikely that the bagging material is fireproof/or impervious to decay. If the bagging material, or asbestos becomes damaged or worn down over time, or damaged by wildfire hazards (which this area is a high risk for) – these toxic asbestos fibers can be released into the air. If the community inhales or swallows airborne asbestos fibers, they can become lodged in their bodies permanently. And over years, these fibers damage cells, cause inflammation and may lead to various cancers including mesothelioma. This logical interaction of individually analyzed impact areas has not been adequately addressed in this EIS.

Furthermore, while impacts of run off are minimized in the operational plan – the report clearly articulates that – “The run-off ultimately discharges into Ulehawa Stream. The areas between the Project Site and Farrington Highway have not been flood prone. However, there is a history of drainage issues and flood damage in the communities west of the Ulehawa Stream.” (p. 3-12). If the run off – leads directly into Ulehawa stream – Ulehawa stream pours directly into Ulehawa Beach/Nanakuli Beach – which are common sites of recreational activities by the surrounding community. These activities including swimming, fishing, limu collection and consumption of ocean products. Yet, the EIS does not address the potential impact of the various substances being disposed in this landfill - on these activities – and the wellbeing of the community that utilizes the resources in these places. The cross analysis of these individually analyzed impact areas is key.

Inadequately Addressing the Problem of Landfill Closure

Additionally – once a landfill site becomes filled to capacity – and eventually closed, abandoned, or inoperable – who will be monitoring and maintaining the mitigation efforts for the run off, the dust

control, the fire mitigation, the continually decaying toxic substances that are there? How frequently/regularly will resources/staff be committed to maintaining the integrity of the plans that mitigate adverse impacts on the community? How will the impact on communities continue to be monitored, managed, and addressed?

#### EIS – Provides an Inadequate Evaluation of Alternative Sites Based On Flawed Rating System

The rating system used to prioritize sites for landfill use - as described in the report is inadequate and flawed. The system used to prioritize selection of sites – is the - Mayor's Advisory Committee on Landfill Selection (MACLSS), September 2012 – Community Based Criterion. All criteria have scaled scores ranging from 1 to 10, with 1 indicating the least desirable site and 10 indicating the most desirable site, with reference to each respective criterion.

The table provided indicates various ratings such as:

- Location Relative to Residential Concentrations (10)
- Impact to Visitor Accommodations (4)
- Listed threatened and endangered species (2.5)
- Impact on Archaeological and Culturally Significant Resources (1)

If location relative to residential concentrations is rated 10 – then from my understanding – that would mean a site would be more desirable. For practical purposes – the proximity to residential concentration would increase the ease of collection/disposal of substances. BUT landfill proximity to residential housing – would also be detrimental – because of its impact on community well-being (especially compounded impacts over time – once a landfill becomes full to capacity and is no longer monitored for safety). The ranking system does not take into account these contradictory effects of various criteria.

This weighting system is additionally flawed, as it should include weights that consider

- communities already impacted by multiple currently operating landfills – and the compounded detrimental impacts on the community's health and well-being
- communities inequitably impacted by challenging economic conditions, and
- communities with comparably higher concentration of activities that increase health risks when compared across Oahu.

When there is an increased concentration/placement of less than desirable activities – in one community – especially in the Waianae community that has a

- a significantly lower than average household income when compared across the state
- a large population of Native Hawaiian/Indigenous/Native people



- a proliferation of dumping activities (i.e. preexisting landfills, ordnance reef –uncleaned military dumping, OBOD Disposal – Makua Military reservation)
- then this practice must be also evaluated for its potential to contribute to practices/policies that demonstrate traits of environmental racism.

#### CULTURAL IMPACT

The placement of this landfill – puts into jeopardy –cultural sites that are tied to Maui-Akalana & his mother Hina. The landfill would obstruct Hina’s cave. The significance of this site – is tied to cultural practices that:

- support the observation of seasonal change,
- observe and monitor the availability of particular resources based on those seasons,
- maintain storytelling that demonstrates the importance of family relationships,
- utilize stories to practice the persistence in understanding the context and kuleana of resource management.

To put this into context – that perhaps the general public might understand – building a landfill here - would be equivalent to – building a landfill next to a site of significant cultural or historical prominence. For example – it would be like building a landfill next to the Iolani Palace, the State Capital, the Arizona Memorial, Punchbowl Cemetery, or Kaiona beach. It erodes the significance of the place – and sacredness of the activities that are tied to that location – by its presence.

In some communities, the collective memory of Pearl Harbor is a sacred cultural site, and folks participate in visiting the Arizona Memorial as a way to bring restoration and honor to the events that happened there. For some, that place – allows them to weave the fabric of stories that guide a sense of identity. Placing a landfill next to it – would be equivalent to degrading its’ significance.

In other communities, the Iolani Palace, represents a sacred cultural site, and a place of significance. And folks participate in visiting the palace as a way to bring restoration and honor to the events that happened there, and a potential projected future that it represents. For many, that place – allows them to weave the fabric of stories that guide a sense of identity. Placing a landfill next to it – would be equivalent to degrading its’ significance.

In this same vein, Hina’s cave is tied to the birthing of Maui-Akalana. Ulehawa stream is where Maui and his brothers captured Pimoe, and brought forth the Hawaiian archipelago. And this site – is tied to the location where Maui performed supernatural feats – of slowing the sun – so that his mother Hina’s kapa could dry. These stories are significant because they teach about – celestial navigation, resource availability, the fluctuation of Waianae’s resources based on seasonal changes, and elevating practices that shape world view and identity. Placing a landfill in the midst of this space – is equivalent to degrading its significance.

EIS Technical Document is Exclusive & Problematic

The EIS alone is 540+ pages, not including the Appendix. In order to meaningfully inform and engage the community - key summaries should be written in commonplace – easy to understand- language.

Potentially, the format should begin with a 5 page max summary – outlining in layman’s terms – key findings, key impacts, and mitigation efforts. While the depths of the document is necessary and useful, it is unacceptable to present information in a manner that is exclusive in the way that it is presented – i.e. highly technical language, no key summary of impact areas.

In Summary:

- PVT Landfill Expansion should not happen without a parallel executed plan of researching, development, and prioritization of technology alternatives
- EIS does not provide adequate information on the possible impacts of interactions between individually reported impact areas (i.e. wildlife hazards, various substances being dumped and fire impact, etc.)
- EIS does not adequately address the problem of Landfill Closure – and its’ commitment to continue monitoring impacts on community health and mitigation measures for dust/fireetc
- EIS provides an inadequate evaluation of alternative sites based on a flawed rating system
- EIS does not address impacts to cultural sites present in the Landfill Expansion area
- EIS presentation is inadequate – and does not provide a simple summary of condensed findings of impact for ease of community engagement and comprehension of materials provided

Mahalo for your consideration.

Ileana Ruelas

January 10, 2020

Joseph Simpliciano  
86-194 Leihoku Street  
Waianae, Hawaii 96792

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Joseph Simpliciano:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and provide the following response to your comments and questions.

Groundwater Resources:

EIS Section 3.4, *Water Resources* discusses potential impacts on surface and ground water quality. The proposed facility is not located over a drinking water aquifer and does not pose a threat to current drinking water sources. The Proposed Action is located over three aquifers, which are classified as not suitable for drinking water and not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990). The Project Site is located about three (3) miles away and down gradient from the nearest drinking water source. The landfill area will be lined and monitored to protect the underlying groundwater. Groundwater monitoring data over the past twelve years demonstrate the PVT ISWMF operations have not negatively impacted groundwater or surface water quality.

Cultural Resources:

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describes potential impacts to cultural resources. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA did not find no evidence of traditional cultural practices at the Project Site, including subsistence farming and gathering. Therefore, the CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

Agricultural Uses:

EIS Section 6.2.2.7, *Agricultural Productivity Ratings* discusses the agricultural suitability of the Project Site, including history of the Project Site and its uses. The non-productive soils, lack of water, and lack of historic agricultural use demonstrate the Project Site is not suitable for food or fuel crops.

Alternative Locations:

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

Gasification Unit – Campbell Industrial Park:

PVT has no control over a gasification facility installation or operations at the Campbell Industrial Park. PVT generates feedstock that can be used by the facility, when built.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: Joseph Simpliciano  
Sent: Monday, August 19, 2019 10:43:34 AM (UTC-10:00) Hawaii  
To: fkrantz@honolulu.gov; EIS Comments  
Cc: josiahjury@gmail.com  
Subject: Opposition to PVT landfill

Aloha,

As a elected member of the Neighborhood board committee in Waianae, Lifelong Community member and Hawaiian, I am writing in opposition to PVT's request to relocate their operations across the street from where they are currently operating. I am against the idea of PVT remaining on the Waianae coast as we have two landfills already. The two landfills does nothing for the community on the westside but does everything for the island. PVT can relocate themselves to another area on the island, they have already built a mountain of trash behind the homes on mohihi street. I call PVT a landfill because they still fill the land with items that cannot be reclaimed...What is the permanent damage to the soil and our water table? No one knows because this is all happening underground each time there is rain or floods. I don't think the answer is expanding PVT, the answer is moving with the gasification facility in Campbell industrial park, wouldn't it make more sense moving PVT to Campbell industrial to ease the traffic congestion and speeding semi trucks on farrington Highway in Waianae? This is from PVT website;

Today, burying debris in the landfill is the last resort for dealing with construction debris that cannot be reused or recycled. A new PVT recycling system that began operation in summer 2014 enables us to divert up to 80 percent of the debris that's brought to the facility, so only about 20 percent actually ends up in the landfill.

- If 20% ends up in the soil how is gaining another piece of property and forever tainting the land within Hawaiian culture and belief? There will never be reclaiming of the land to plant Kalo or anything in the future.

The PVT recycling system is able to process up to 900 tons of feedstock per day. However, the gasification facility planned for Campbell Industrial Park that would burn the feedstock for energy production hasn't been built and is still in the permitting process. For now, PVT is stockpiling feedstock in the landfill, where it can be easily reclaimed. Eventually, pressure will be applied to landfill capacity unless the feedstock begins to flow out of the facility as quickly as it flows in.

- what is the hold up with the gasification facility and why must PVT be in nanakuli instead of Campbell?

- wouldn't having PVT, H-Power and the proposed gasification facility located next to each other reasonable?

Mahalo nui,  
Joseph K. Simpliciano  
86-194 Leihokū street  
Waianae, Hawaii 96792

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January 10, 2020

Rouel Velasco  
Rouel.velasco@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Rouel Velasco:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;




- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** Aloha! <[rouel.velasco@gmail.com](mailto:rouel.velasco@gmail.com)>

**Sent:** Tuesday, August 20, 2019 3:50 PM

**To:** [fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov); [steve@pvtland.com](mailto:steve@pvtland.com); Karl Bromwell <[karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com)>

**Subject:** Opposition feedback regarding expansion/relocation of the PVT Waste Management

Aloha,

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. The Wai'anae community and coast continues to be further marginalized, disenfranchised and in turn, continues to be negatively stereotyped and oppressed. Consider other alternatives as this concern is a statewide issue for all of Hawai'i's residents and visitors.

There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole PVT in Nānākuli and Lualualei.

Mahalo,

Rouel Velasco, Kapolei  
Former residence of Mā'ili.

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January 10, 2020

Danielle Vo'a  
pualani\_bubu@yahoo.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Danielle Vo'a:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health and cultural resources.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

PVT currently accepts double-bagged Asbestos Containing Material (ACM). ACM disposal is regulated by Federal and State law and PVT's Solid Waste Management Permit. Special accounts and review procedures are required for customers proposing to dispose of ACM. The location of ACM is recorded and tracked using Global Positioning System (GPS) technology. PVT will continue to accept ACM at their existing facility until the ACM disposal area reaches capacity, at which time PVT will no longer accept ACM. No ACM disposal area is proposed for the relocation site.

ACM cannot leach out of the landfill. The landfill has a liner and leachate collection system that prevents any impact to groundwater. Based on the groundwater monitoring data collected since 2004, there have been no known releases of contaminants from the landfill to the environment. The ACM does not pose a risk to human health or the environment. The Hawaii Department of Health required PVT to have an independent expert conduct a human health risk assessment using EPA-approved methods. This study is available on the PVT website.

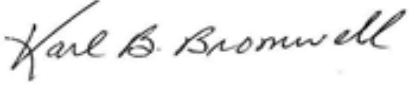
EIS Section 5.2, *Cultural Resources and Cultural Impact Assessment* (CIA) (Appendix H) describes the cultural importance and potential impacts to Hina's Cave. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

A summary of the testimony at the Nanakuli-Maili Neighborhood Board Meetings is provided in the Final EIS Section 5.3.2.4, *PVT ISWMF Social Characteristics*. The Final EIS Section 10, *Letters on the Draft EIS and Responses* includes written testimony from agencies and community members. It also includes the position letter from the Nanakuli-Maili Neighborhood Board. The petition in opposition to the Proposed Relocation is included in the Final EIS as Appendix M.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive style with a large, stylized 'K' and 'B'.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

September 5, 2019

Welina mai kākou,

I, Danielle Vo'a, oppose the operation or creation of any landfill in Nānākuli and Lualualei, and anywhere on the Wai'anae coast. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Everyday, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations.

I have been living on Helelua Street for 30 years, with Pu'u Heleakalā being my backyard. I would enjoy hiking this beautiful mauna as a child, and now me and my 5 children enjoy hiking Pu'u Heleakalā today. The thought of having a possible landfill directly behind my home is heart wrenching and disturbing. Having a landfill so close to my home, my family, will be detrimental to my family's health, to all residents in Nanakuli's health. PVT is hewa, wrong for even thinking about building a landfill so close to a residential area. My kids, my 'ohana, and my health is top priority and do not want a landfill near my home.

Before the board meeting on September 4<sup>th</sup>, me and my 'ohana walked up and down Helelua Street speaking to the community about PVT's plan and where they would like to relocate. I was able to speak with many people and was able to gather over 350 signatures for a petition to oppose the relocation to Pu'u Heleakalā. Many of the residents were not aware and were not happy about the fact that a landfill will be built right next to their homes. While door knocking on every single townhouse and apartment on Helelua, I was able to meet many ex-employees of PVT and they shared with me how they would handle asbestos. Many of them shared with me how they even quit working at PVT because they began to suffer from health issues they believed was from the landfill and all the exposure.

Many of the residents living on Pu'u Heleakala showed great concern and explained to me that they were not aware of PVT's plan. I was able to let them know about the board meeting



that was held on September 4<sup>th</sup>. Throughout my petition, I only encountered two people who supported PVT, and one of those two people was the grandmother of Diamond Garcia who supports PVT.

On the cultural aspect of the mauna, Pu'u Heleakala is also very sacred to me and my 'ohana. This is where Māui resided, and the very mountain where he slowed the sun. Pu'u Heleakala is also home to Hina's Cave. This is where Hina, the mother of Māui lived, and where she would make her kapa. The thought of this sacred place becoming covered in trash would be a terrible thing, and will show no respect for our Hawaiian culture at all.

We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole, we do not want PVT in Nānākuli, Lualualei, or anywhere in the Wai'anae coast.

With concern,

Danielle Vo'a, [Pu'u Heleakala, Helelua St. Resident].

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January 10, 2020

Faafetai Jeff M. Vo'a  
samoan\_maia@yahoo.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Vo'a:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and provide the following response to your comments and questions.

Groundwater Resources:

EIS Section 3.4, *Water Resources* discusses potential impacts on surface and ground water quality. The proposed facility is not located over a drinking water aquifer and does not pose a threat to current drinking water sources. The Proposed Action is located over three aquifers, which are classified as not suitable for drinking water and not ecologically important by the aquifer identification and classification system for Oahu, published by the Water Resources Research Center at the University of Hawaii (Mink and Lau, 1990). The Project Site is located about three (3) miles away and down gradient from the nearest drinking water source. The landfill area will be lined and monitored to protect the underlying groundwater. Groundwater monitoring data over the past twelve years demonstrate the PVT ISWMF operations have not negatively impacted groundwater or surface water quality.

Air Quality and Public Health:

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific Landscaping Plan;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and concrete channel with PVT's commercial street sweeper.

#### Noise:

EIS Section 3.6, *Noise* summarizes the *Environmental Noise Assessment Report* (Appendix D) prepared by D.L. Adams for the Proposed Action. The report concludes that noise levels are expected to decrease for most surrounding properties. The lone area where the noise level is calculated to increase is the housing complex directly south of the Project Site, which is not expected to be significant (i.e., less than 3dB or "just barely perceptible").

#### Cultural Resources:

EIS Section 5.2, *Cultural Resources* and *Cultural Impact Assessment* (CIA) (Appendix H) describes the cultural importance and potential impacts to Hina's Cave. The EIS acknowledges that the Project Site lies in the vicinity of culturally significant sites, including Hina's Cave, Puu Heleakala, Puu o Hulu Kai, Puu o Hulu Uka, Makalualualei, Ulehawa, and landforms associated with Maui. No adverse impact to these landforms was identified. The CIA recommends that: "view corridors protecting views of wahi pana such as Puu Heleakala remain unobstructed." The potential impacts to scenic resources are discussed in Section 5.4, *Scenic Resources*. The Proposed Action would be at a maximum final elevation of 255 feet amsl and would not obstruct or alter the views among other culturally important landforms in Lualualei. The CIA concluded that the Proposed Action would have no impacts to traditional cultural properties, places, or practices.

#### Biological Resources:

EIS Section 3.7, *Biological Surveys* discusses potential impacts to botanical, avian, and terrestrial mammalian surveys of the project site. The Biological Surveys Report (Appendix E) summarizes the findings of a biological surveys conducted at or in the vicinity of the Project Site, including four faunal surveys conducted by Reginald David in 2004, 2007, 2008 and 2018 and four botanical surveys conducted by Eric Guinther in 1992, 2003, 2007, and 2018. The report concluded that the Proposed Action is not anticipated to have impacts on plant, avian, or mammalian species currently listed or proposed for listing under either the Federal or State of Hawaii endangered species statutes. One plant species was observed during the survey that is included on the State of Hawaii Species of Greatest Conservation Need: mao or Hawaiian cotton (*Gossypium tomentosum*). Mao is an endemic shrub but is not a listed species. The species was not found in abundance at the Project Site.

#### Setback:

PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

#### Alternative Locations:

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting

study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

Testimony and Petition:

A summary of the testimony at the Nanakuli-Maili Neighborhood Board Meetings is provided in the Final EIS Section 5.3.2.4, *PVT ISWMF Social Characteristics*. The Final EIS Section 10, *Letters on the Draft EIS and Responses* includes written testimony from agencies and community members. It also includes the position letter from the Nanakuli-Maili Neighborhood Board. The petition in opposition to the Proposed Relocation is included in the Final EIS as Appendix M.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**

Principal Environmental Scientist

Hart Crowser, Inc.

September 5, 2019

To whom it may concern,

I, Fa'afetai Jeff M. Vo'a, oppose the operation or creation of any landfill in Nānākuli and Lualualei, and anywhere on the Wai'anae coast. The proposed PVT Landfills supposedly will only be a few hundred feet to the nearest residences.

§11-58.1-01-72 of the Hawaii Administrative Rules states that waste management control needs to;

- (1) Prevent pollution of the drinking water supply or waters of the State; has anyone tried to even find out if the current or proposed extension of PVT landfill is/will be sitting on our fresh water in this state of Hawai'i? If there are claims that proper research has been done to show that the landfill is/will not be sitting on an aquifer then please make it readily available and known to the public before any decision is made for the extension of PVT.

§11-58.1-02-04 states that these rules are applicable to all persons who propose and/or own a landfill and it would need to;

- (2) Prevent air pollution;
- (3) Prevent the spread of disease and the creation of nuisances;
- (4) Protect the public health and safety;.

If the winds are able to carry seeds and insects across the largest body of water (The Pacific Ocean), then a few hundred feet will mean nothing as clouds of dust, debris and unknown chemicals fill our homes and lungs as we wake each morning until we have taken our last breaths. Every day, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There is no way that the landfill will be able to prevent the nuisances of the noise and dust filled chemicals that will be blowing into our homes and community. There exists no other such landfill in Hawai'i that abuts hundreds of residences and so closely. Furthermore, there has never been an independent study clarifying that PVT Landfills do not pose a

threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. Having a landfill so close to my home, my family, will be detrimental to my family's health and the health of all residents in Nanakuli. PVT is hewa, wrong for even thinking about building a landfill so close to a residential area. My kids, my 'ohana, and my health is top priority and do not want a landfill near my home.

§11-58.1-05-06;

(5) Conserve natural resources; and

(6) Preserve and enhance the beauty and quality of the environment. [Eff JAN 13, 1994] (Auth: HRS §§321-11, 342G-3, 342G-13, 342H-2, 342H-3, 342H-18, 342N-3).

That virgin land that PVTs prying eyes are on will be raped by the tons of trash that will be piled upon her, all for the economic gains of PVT and its affiliates. There is absolutely no way an artificially made mountain of trash will be preserving or enhancing the natural quality of our mauna, Pu'u Heleakala. PVT's extension will already be breaking these minimum standards of the Hawaii Administrative Rules. I ask that you please find another location.

Native Hawaiian traditional and cultural rights are secured by article XII, Section 7 of the Hawaii State Constitution.

"The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights."

HRS § 7-1. Building materials, water, etc.; landlords' titles subject to tenants' use. This statute enumerates building materials that can be gathered for personal use. "Firewood, house-timber, aho cord, thatch, or Ki leaf . . . The people shall also have a right to drinking water, and running water, and the right of way."



I have been living on Helelua Street for about 15 years, with Pu'u Heleakalā being my backyard. I enjoy hiking this beautiful mauna with my wife and 5 children as we ascend, explore and teach/learn about Pu'u Heleakalā and its ties to their Hawaiian heritage. There are native Hawaiian plants that thrive only under certain conditions which is this dry forest in Nanakuli. On the cultural aspect of the mauna, Pu'u Heleakala is also very sacred to me and my 'ohana. This is where Māui had resided, and the very mountain where he slowed the sun so that his mother's kapa could dry. Pu'u Heleakala is also home to Hina's Cave. This is where Hina, the mother of Māui lived, and where she would make her kapa. The thought of this sacred place becoming covered in trash would be a terrible thing and will show no respect for our Hawaiian culture at all. The thought of having a possible landfill directly on this mauna is heart wrenching and disturbing to see that our culture has little to no meaning to those who support and are looking to build over the site of Hinas cave an ancestor of Hawaiian blood. This extension will be infringing on our cultural rights that the State of Hawaii should be protecting. The building and blocking of Hinas cave and impeding our access as native Hawaiians will be severing the connection and the right of way that we, the people of this ahupua'a have with this mauna.

Before the board meeting on September 4<sup>th</sup>, my 'ohana and I had traversed the whole length of Helelua (The nearest residential community to the proposed landfill site) speaking to the community about PVT's plan and where they would like to expand. My wife and I were able to speak with many residents and were able to gather over 350 signatures for a petition to oppose the expansion of PVT onto Pu'u Heleakalā. Many of the residents were not aware and were not happy about the fact that a landfill will be built right next to their homes. While door knocking on every single townhouse and apartment on Helelua St., I was surprised to meet many ex-employees of PVT who shared with me personal testimonies on how they weren't wearing or given the correct PPE to handle asbestos and how they buried chemicals under mounds of garbage hoping that it will never be seen again. Many of them shared with me how they even quit working at PVT because they began to suffer from health issues they believed was from the landfill and all the exposure to its contents.

The board members whom we the people had elected to represent us had told us that a survey had been sent out to the community saying that we supported PVT's actions of expanding to Pu'u Heleakalā, lies! Many of the residents living on Pu'u Heleakalā showed great concern and explained to me that they were not aware of PVT's plan. I was able to let them know about

the board meeting that was held on September 4<sup>th</sup> whether they were for or against the expansion of PVT. The board members had said that 1,500 people were for the expansion, well my wife and I with my keiki's went into the community and had gotten over 350 signatures in Helelua alone and over 3,600 overall signees which we had turned over to the board on Sept, 4<sup>th</sup>, 2019 the night of the meeting. There are about 8,491 adults residing in Nanakuli, with the little time given to us we had garnered nearly half of Nanakuli's residents who signed AGAINST the expansion of PVT. Throughout my petition, I only encountered two people who supported PVT, a family member of an employee to PVT and the grandmother of Diamond Garcia who supports PVT.

We affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill. 'A'ole, we do not want PVT in Nānākuli, Lualualei, or anywhere in the Wai'anae coast. We the people of the community urge you to work with the state in finding another location that will benefit us all.

With concern,

Fa'afetai Jeff M. Vo'a, [Pu'u Heleakala, Helelua St. Resident].

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January 10, 2020

Leona Waston  
87-332 Manuaihue Street  
Waianae, Hawaii

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Leona Waston:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you are concerned about the proximity of the facility to residential areas and potential impacts on the environment.

EIS Section 3, Natural Environment discusses the existing conditions and potential impacts of the proposed relocation on:

- Topography, Geology, and Soils
- Natural Hazards
- Water Resources
- Air Quality
- Noise; and
- Biological Resources

The EIS concludes that the relocation project would not have a significant adverse impact on these natural resources.

PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and

- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

**From:** 'EIS Comments'

**Sent:** Friday, September 6, 2019 4:44:05 PM (UTC-10:00) Hawaii

**To:** EIS Comments

**Subject:** EIS Comments

Name	Leona Watson
Address	87-332 Manuaihue Street
City	Waianae
State	Hawaii
E-mail	<a href="mailto:Lpwright@hawaii.edu">Lpwright@hawaii.edu</a>
Comment	<p>Aloha mai Kakou, Mahalo for your generosity to our community in scholarships. However, I am NOT confident with the decision to expand PVT because of the threat to aina. As a teacher, I work to instill malama and aloha as values in daily living. Using aloha and malama is a practice that is something that I do for our aina, kanaka and community. As a resident of Lualualei and Nanakuli I am afraid of what the environmental effects can cause to our aina, ohana and community. Please reconsider your decision and NOT expand the landfill. We ask that the opala and trash from these demolition jobs be place in another location. Our aina and our community doesn't deserve a landfill that will be place with in 4 miles of schools, homes, stores and restaurants. We need to sustain our aina, kanaka and community. Therefore, I stand for aloha aina! A'ole PVT! Malama pono a me Iesu Pu, Leona Watson</p>

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January 10, 2020

Kamuela Werner, MPH  
kamuelaw@gmail.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Mr. Werner:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS. We've considered your comments and provide the following response.

Section 3.5 Air Quality:

Hydrogen sulfide may be formed in a landfill environment through the reduction of sulfate ( $\text{SO}_4^{2-}$ ) by sulfate-reducing bacteria. The sources of reducible sulfur in the PVT landfill is gypsum drywall. There are several contributing factors that may result in the production of Hydrogen sulfide in C&D landfills. These factors are summarized in the table below. PVT has surveyed the existing landfill for landfill gases and has never detected hydrogen sulfide.

**Factors Contributing to Hydrogen Sulfide Generation in C&D Landfills**

H <sub>2</sub> S Formation Factor	Discussion
<b>Sulfate Source</b>	<p>The sources of reducible sulfur in the PVT landfill is gypsum drywall.</p> <p>The diversion of drywall from disposal has been recommended as a measure to prevent Hydrogen Sulfide formation in landfills. While a variety of recycling markets have been developed for gypsum drywall, including for purposes such as agricultural soil amendments and manufacture of new drywall, these markets are not currently available on Oahu. PVT would explore options to recycle drywall if or when these recycling markets become available.</p>

<b>Moisture</b>	<p>Moisture is required for sulfate-reducing bacteria growth and chemical reactions to occur. Moisture control is recommended by the US EPA to prevent the formation of hydrogen sulfide.</p> <p>The Project Site is in an area of low rainfall. C&amp;D debris is characteristically dry and has little organic material. PVT implements best management practices to reduce moisture in the landfill including:</p> <ul style="list-style-type: none"> <li>• PVT would continue to prohibit the disposal of liquids and wet waste into the landfill.</li> <li>• The stormwater management system (described in Section 2.5.3.3, Stormwater Management [Site-wide]) would divert stormwater away from the active landfill cells and around the perimeter of the landfill.</li> <li>• The active waste disposal area would be as small as possible so it can be covered should a storm approach.</li> <li>• Daily soil cover would be placed over the waste to discourage percolation.</li> <li>• The landfill will be lined to prevent the contact of groundwater with the waste mass.</li> <li>• The landfill will be installed with a Leachate Collection and Removal System (LCRS) to remove leachate and prevent the build-up of moisture at the base of the waste mass.</li> </ul>
<b>Organic Matter</b>	<p>Production of hydrogen sulfide requires active organic matter as a substrate for sulfate-reducing bacteria utilization. Control of drywall landfiling so that it is separated from active waste materials may reduce hydrogen sulfide gas generation.</p> <p>C&amp;D debris characteristically has little or no active organic material. PVT diverts inert wood debris from the landfill through the MRD process.</p>
<b>pH Conditions</b>	<p>Sulfate-reducing bacteria typically thrive in environments with pH ranging from 6 to 9, though sulfate-reducing bacteria have been observed in environments with greater acidity.</p> <p>The use of high-pH fines and certain C&amp;D materials (e.g. concrete) can significantly reduce hydrogen sulfide concentrations. Two high-pH fines are commonly used in the PVT landfill: AES coal ash and concrete fines. Several studies have indicated that the use of coal ash and concrete fines help control hydrogen sulfide emissions by an order of magnitude in a C&amp;D cell.</p>

(Source: EPA 2014)

The following edits were made to the Final EIS to address hydrogen sulfide (text changes underlined in red):

#### Section 3.5.2.3, *Air Quality at the Project Site, Odors and Landfill Gases*

Hydrogen sulfide (H<sub>2</sub>S) is a flammable, colorless gas with a characteristic rotten-egg-like odor. Humans can detect hydrogen sulfide odors at very low levels in air [i.e. 8 ppb], generally below levels that would cause health effects (EPA 2014). Hydrogen sulfide may be formed in a landfill environment through the reduction of sulfate (SO<sub>4</sub><sup>2-</sup>) by sulfate-reducing bacteria. There are several contributing factors that may result in the production of hydrogen sulfide in C&D landfills (EPA 2014). Moisture control is recommended by the US EPA to prevent the formation of hydrogen sulfide. The Project Site is in an area of low rainfall. C&D debris is characteristically dry and has little or no active organic material. PVT implements best management practices to reduce

moisture in the landfill as described in Section 2.5, Description of the Proposed Action. PVT has surveyed the existing landfill for landfill gases and has never detected hydrogen sulfide.

Natural Environment:

The HDOH Adult Mental Health Division, HDOH Child and Adolescent Mental Health Division, Waianae Coast Community Mental Health Center, Inc. and Waianae Coast Comprehensive Health Center provides a range of mental health services available to the Waianae community.

PVT is not responsible for providing mental health monitoring or services to the Waianae Coast Community.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

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From: kamuela werner [kamuelaw@gmail.com]

Sent: Friday, September 06, 2019 5:40 PM

To: Kraintz, Franz

Cc: NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; Rep. Stacelynn K.M. Eli; Senator Maile Shimabukuro; [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); Anthony Makana Paris

Subject: Comments & Questions Re: 2019 PVT Integrated Solid Waste Management Facility Draft EIS

Aloha:

From Maili, my name is Kamuela Werner. I graduated from Nanakuli High School in 2006 and hold a Bachelors of Science in Natural Resource and Environmental Management as well as a Masters in Public Health from the University of Hawai'i. I have worked at the Department of Native Hawaiian Health at the John A. Burns School of Medicine as a Native Hawaiian and Pacific Islander health disparities researcher, as a Native Hawaiian Congressional fellow for Sen. Mazie Hirono in D.C., and now I am back at the University of Hawai'i pursuing additional graduate education.

Please find my comments and questions below on PVT Land Company, LTD's (PVT) 2019 Draft EIS (DEIS) - PVT Integrated Solid Waste Management Facility Relocation, Waianae District, Oahu, Hawaii, TMK:(1) 8-7-009:07.

### Section 3.5 Air Quality

As a construction and demolition landfill, the current PVT site contains tons of gypsum drywall which, during the decomposition process, produces hydrogen sulfide (H<sub>2</sub>S) gas (See Hydrogen sulfide generation in simulated construction and demolition debris landfills: impact of waste composition, The Journal of the Air & Waste Management Association, Yang et al., 2006). Residential exposure to H<sub>2</sub>S gas within 3.1 miles of a landfill is associated with lung cancer deaths as well as with death, disease and hospitalizations from respiratory illnesses (See Morbidity and mortality of people who live close to municipal waste landfills: a multisite cohort study, International Journal of Epidemiology, Mataloni, et al., 2016). All air quality studies mentioned in the PVT DEIS has not tested for H<sub>2</sub>S gas nor does it indicate that H<sub>2</sub>S gas will be monitored in the future for both its current and proposed sites. In fact, according to the PVT DEIS, the only Hawaii Department of Health (HDOH) air monitoring station that measures H<sub>2</sub>S gas is located in Puna on Hawaii Island. Since Waianae has one of the highest concentrations of Native Hawaiian and Pacific Islanders (NHOPi) in the state (See Underserved Populations in Hawaii, Workforce Development Council, Liou, 2018), and respiratory-related issues impact NHOPi the most, where the overall death rate due to asthma is over four times as high for this group than for Hawaii overall (Ibid.), how will HDOH monitor and regulate H<sub>2</sub>S gas emissions produced from PVT's current and proposed landfill sites? Further, how will HDOH inform and educate Nanakuli, Maili, and Lualualei residents about the risk of H<sub>2</sub>S gas exposure, especially for those living within 3.1 miles of the current and proposed PVT landfill sites?

### 3. Natural Environment

Waianae has one of the highest concentrations of Native Hawaiian and Pacific Islanders (NHOPi) in the state (See Underserved Populations in Hawaii, Workforce Development Council, Liou, 2018). Waianae also has the highest rates of poverty in the state (Ibid.). Poverty is linked with common mental illnesses

(See Mental Health and Poverty, McSilver Institute for Poverty Policy and Research, New York University; Poverty and common mental disorders in low and middle income countries: A systematic review, Social Science and Medicine Journal, Lund et al., 2010). According to Downey and Willigen (2011), living near to industrial activity (i.e. landfills) is associated with perceptions of individual powerlessness and neighborhood disorder, leading to higher levels of psychological distress (See Environmental Stressors: The Mental Health Impacts of Living Near Industrial Activity, Journal of Health and Social Behavior, 2011). With these findings and linkages in mind, how will the HDOH study, monitor, and mitigate the potential negative affects PVT's current and proposed landfill activities may have on NHOPI mental health, especially for NHOPI living and working near to PVT operations?

Me ke aloha,

Kamuela Werner, MPH  
Mali Resident

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January 10, 2020

Whitney Kehaulani Wong and Family  
kehaulani74@aol.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Whitney Kehaulani Wong and Family:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 4 miles from residential or commercial development.

PVT does not accept hazardous wastes, as defined by State and Federal regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable State and Federal laws.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;



- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

5 September 2019

To whom this concern:

Aloha mai kākou,

I oppose the operation or creation of any landfill in Nānākuli and Lualualei. There is only 750 feet from the current and proposed PVT Landfills to the nearest residences. Every day, thousands of people visit the five schools, kūpuna housing, two grocery stores, two medical clinics, restaurants, parks, the new Nānākuli Community Learning Center along with a future shopping center projected to be built in the next 2 years, and not to forget the hundreds of residences all within two miles of the current and proposed PVT Landfills.

3.6 miles is the driving distance from the start of Nānākuli land division to the end of Lualualei. We clearly see that Nānākuli and Lualualei land divisions are over populated with residential, commercial, private and public infrastructures... and PVT proposed to expand another 179 acres horizontally and 255ft. amsl. 255ft of hazardous materials and unrecyclable, unbiodegradable rubbish!

Further, there has never been an independent study clarifying that PVT Landfills do not pose a threat to public health, especially to the thousands of people that live, work, and play within a 4-miles radius of operations. We affirm that everyone in Hawai‘i should have a “clean and healthful environment” (Hawaii State Const. Article XI, Sec. 9). No community should suffer a landfill. There should be at least 4-miles between a community and a landfill.

In closing, the majority of our community are Native Hawaiian indigenous peoples of Hawai‘i! A community of doctors, lawyers, teachers, professors, politicians, musicians, fisherman, farmers, blue collar workers, truck drivers, scientist, biologist, students, kūpuna. The diversity of our community is endless and special, because we are the people of Hawai‘i. We are NOT rubbish, and we shouldn’t be treated so.

I’ll end with two statements; the first comes from the well-known patriotic song written by Ellen Keho‘ohiwaokalani Wright Prendergast in 1893 soon after the illegal overthrow of the Hawaiian Kingdom. “**Ua lawa mākou i ka pōhaku.**” We are satisfied with the ‘stones’ of this land. No amount of money can replace the value of ‘āina (land). The second is a Native American prophecy, “When all the trees are cut down, when all the animals are dead, when all the waters are poisoned, when all the air is unsafe to breathe, only then will we discover... We cannot eat money!

‘A‘ole PVT in Nānākuli and Lualualei... in Wai‘anae for that matter and in Hawai‘i period! Enough is enough.

A hiki i ke Aloha ‘Āina hope loa

*(Until the very last Aloha ‘Āina),*

Whitney Kēhaulani Wong (33 yrs), Nānākuli Valley

Gaison Keli‘i Pio Adams (29 yrs), Nānākuli Valley

Gaison Keli‘i Pio Adams (4 yrs), Nānākuli Valley

Kealapono Keohokalauaka‘īlima Adams (3 yrs), Nānākuli Valley

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***Draft EIS Comment Letters and Responses – Community Members - Aikea Hawaii  
Form Letter***

Sarina Cabaccang

Darren Ho

Brett Jones

Javier Mendez

Rodney Nakashima

Marisa Nucum

Margaret Primacio

Benton Rodden

Paola Rodelas

Colleen Rost-Banik

Donald Rost-Banik

Lauren Watanabe

Lucia You

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January 10, 2020

Aikea Hawaii  
[community@aikeahawaii.org](mailto:community@aikeahawaii.org)

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Aikea Hawaii 'ohana:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;
- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and

- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads.

PVT does not accept hazardous wastes, as defined by Federal and State regulations. All customers are subject to PVT ISWMF prequalification procedures, PVT's Solid Waste Management Permit, and applicable Federal and State laws.

From the objectives of your organization, you may be interested in EIS Section 5.3, *Socioeconomic Resources and Land Use Characteristics* that details the contribution made by PVT to its employees and the community.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.



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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Friday, August 30, 2019 2:30 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Sarina Cabaccang <[sarin\\_55@hotmail.com](mailto:sarin_55@hotmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

The current PVT landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. A thin 750 feet "buffer zone" separates the hazardous waste materials dumped there from the keiki and kupuna, places of worship, farms, and Ulehawa stream.

There are numerous testimonials since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT landfill in specific. Also, there are numerous scientific studies that clarify the negative effects of landfills on human health, including the negative effects of construction and demolition landfills in specific.

The Hawaii State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). Let us seek pono by taking steps toward environmental and health justice for our communities.

cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Wednesday, September 04, 2019 4:05 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Darren <[hodarren@hawaii.edu](mailto:hodarren@hawaii.edu)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

The current PVT landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. A thin 750 feet "buffer zone" separates the hazardous waste materials dumped there from the keiki and kupuna, places of worship, farms, and Ulehawa stream.

There are numerous testimonials since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT landfill in specific. Also, there are numerous scientific studies that clarify the negative effects of landfills on human health, including the negative effects of construction and demolition landfills in specific.

The Hawaii State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). Let us seek pono by taking steps toward environmental and health justice for our communities.

cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Friday, August 30, 2019 2:27 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Brett Jones <[bjhoops1@gmail.com](mailto:bjhoops1@gmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

The current PVT landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. A thin 750 feet "buffer zone" separates the hazardous waste materials dumped there from the keiki and kupuna, places of worship, farms, and Ulehawa stream.

There are numerous testimonials since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT landfill in specific. Also, there are numerous scientific studies that clarify the negative effects of landfills on human health, including the negative effects of construction and demolition landfills in specific.

The Hawaii State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). Let us seek pono by taking steps toward environmental and health justice for our communities.

cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]

Sent: Friday, August 30, 2019 2:14 PM

To: Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)

Subject: PVT relocation opposition

From: Javier Mendez <[menjavi@gmail.com](mailto:menjavi@gmail.com)>

Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

The current PVT landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. A thin 750 feet "buffer zone" separates the hazardous waste materials dumped there from the keiki and kupuna, places of worship, farms, and Ulehawa stream.

There are numerous testimonials since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT landfill in specific. Also, there are numerous scientific studies that clarify the negative effects of landfills on human health, including the negative effects of construction and demolition landfills in specific.

The Hawaii State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). Let us seek pono by taking steps toward environmental and health justice for our communities.

cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Saturday, August 31, 2019 8:41 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Rodney nakashima <[rnakashima123@hotmail.com](mailto:rnakashima123@hotmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Friday, August 30, 2019 7:22 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Marisa Nucum <[mariarisa.kilo@gmail.com](mailto:mariarisa.kilo@gmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Saturday, August 31, 2019 8:45 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Margaret Primacio <[stibbardm003@hawaii.rr.com](mailto:stibbardm003@hawaii.rr.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

According to the National Center for Health Statistics, the life expectancies for those that live within a two-mile radius from the current PVT landfill are the second- and third-lowest in the State of Hawai'i. These neighborhoods include Nānākuli Homestead, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakala. These neighborhoods have a life expectancy that is a full decade less than the State average (82 years).

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Friday, August 30, 2019 11:11 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Benton <[bentonrodden@gmail.com](mailto:bentonrodden@gmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

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There are numerous testimonials since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT landfill in specific. Also, there are numerous scientific studies that clarify the negative effects of landfills on human health, including the negative effects of construction and demolition landfills in specific.

The Hawaii State Constitution affirms that everyone in Hawai'i should have a "clean and healthful environment" (Article XI, Sec. 9). Let us seek pono by taking steps toward environmental and health justice for our communities.

cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)



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From: AiKea Hawaii [community@aikeahawaii.org]

Sent: Monday, September 02, 2019 3:17 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)

Subject: PVT relocation opposition

From: Paola Rodelas <[paolarodelas@gmail.com](mailto:paolarodelas@gmail.com)>

Subject: Opposition to PVT relocation

Message Body:

Aloha:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

Warm regards,  
Paola Rodelas

--

This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

---

From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Monday, September 02, 2019 8:07 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Donald Rost Banik <[dmbanik@hotmail.com](mailto:dmbanik@hotmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Saturday, August 31, 2019 10:27 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Colleen Rost-Banik <[crostbanik@gmail.com](mailto:crostbanik@gmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

I am a member of AiKea, a growing movement of individuals & organizations who care about the future of Hawai'i and are committed to building a larger social & political movement. We believe One Job Should be Enough – to have a roof over our heads, to keep up with the cost of living, to raise our families, to retire with dignity, and to live in an island community which protects our health and welfare. I oppose the relocation of the PVT Integrated Solid Waste Management Facility construction and demolition landfill within such close proximity of our members, their kupuna, and their keiki.

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cc: Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, Hawaii State Department of Health, Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

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This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Tuesday, September 03, 2019 6:26 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Lauren Watanabe <[lauren.watanabe@sierraclub.org](mailto:lauren.watanabe@sierraclub.org)>  
Subject: Opposition to PVT relocation

Message Body:

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--

This e-mail was sent from a contact form on AiKea Hawaii (<https://www.aikeahawaii.org>)

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From: AiKea Hawaii [community@aikeahawaii.org]  
Sent: Saturday, August 31, 2019 8:28 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov)  
Subject: PVT relocation opposition

From: Lucia You <[lucialyou@gmail.com](mailto:lucialyou@gmail.com)>  
Subject: Opposition to PVT relocation

Message Body:

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***Draft EIS Comment Letters and Responses – Community Members - A'ole  
Jotform.com Form Letter***

Henry Agbayani  
Michelle Ah Sam  
Sunshine Aiona  
Lori Ashley  
Christine Auwae  
Jasmine Balictar  
Jolyn Ballenti  
Ryan Benavente  
Susan Bowyer  
Emma Broderick  
Cheri Chai  
Len Chai  
Liana Cortez-Kekawa  
Michael Cuban  
Roxanna Davis  
Kapela Eli  
Kaulana Eli  
Danielle Espiritu  
Lena Esteban  
Peleke Flores  
Raynae Fonoimoana  
Carmen Guzman-Simpliciano  
Ruben A Hanohano Jr.  
Shirline Ho  
Christine Hooker  
Junko Iaela  
Joy Inada  
Lucille Inada  
Roger Inada  
Matthew Ing  
Chelsey Jay  
Jessica Jelf-Albert  
Joan Jensen  
Christine Kaakau  
April Kaawa  
Chanel Kaeo  
Kanoeanuheka Kahalekai-Willing  
Kekuialono Kahele

Kyle Kajihiro  
Nancy Kapiko  
Azure Kawelo  
Brynner Kekua  
Chablos Kekua  
Mona Keliinoi  
Justin Keliipaakaua  
Rawlette Kraut  
Christine Laumauna  
Jasmine Laupola  
Ikaika Lum  
Ja Makepa  
Jan Makepa  
Numela Makinano  
Monte McComber  
Alexander McNicoll  
David Morales  
Sean Nagamatsu  
Karen Nakasone  
Bobbie Nava  
Hoaliku O'Connell  
Michael O'Connell  
Yumi O'Connell  
Shane Paris  
Joanna Pokipala  
Kauai Pratt-Aquino  
Lovenna (Hanohano) Robinson  
Walter Rodenhust  
Kuhi Rowland  
Ileana Haunani Ruelas  
Ernestine Sabagala  
William Sabagala  
Deborah Salis  
George Siket  
Keren Siket  
Mark Siket  
Joseph Simpliciano  
Jayslin Smith

Brandon Tacadena  
Laurie Takeno  
Samantha Tanuvasa  
Bridget Tynanes  
Cade Watanabe  
Kamuela Werner  
Nora Wilson  
Hinaleimoana Wong-Kalu  
Hoolehua Wright

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January 10, 2020

Aole PVT – jotform.com

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Dear Aole PVT – jotform.com 'ohana:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you oppose the PVT ISWMF Relocation project and are concerned about the proximity of the facility to residential areas and potential impacts on public health.

As you've noted, PVT would maintain a 750-foot buffer zone between the nearest residential area and the active disposal area of the Project Site, which complies with the City and County of Honolulu Land Use Ordinance (LUO) (ROH § 21-5.680, Specific Use Standards for Waste Disposal and Processing) and PVT's current Solid Waste Management Permit. The buffer zone would include landscaping, stormwater drainage and basin, drainage features, and access roads. The City and County of Honolulu does not require that landfills be sited 2 miles from residential or commercial development.

The EIS includes a project-specific *Air Quality Impact Report*, to evaluate potential dust emissions (Appendix B). The air quality discussion (Section 3.5, *Air Quality*) also summarizes nine air quality and human health risk assessment studies for the existing PVT ISWMF operations over the last 15 years. These studies conclude that the air quality at the PVT ISWMF does not significantly differ from regional air quality and that dust generated by PVT operations does not pose a health concern. The studies were submitted to Hawaii Department of Health for review as part of the current site's permitting and/or as part of the Hawaii Department of Health's study of dust in the area. The air quality and human health risk assessment reports are available on the PVT website - <http://www.pvtland.com/air-quality-studies/>.

PVT would implement dust control measures to minimize fugitive dust, including but not limited to:

- pave and regularly clean permanent access and haul roads;
- apply water to unpaved roads and any disturbed surfaces that could be subject to dust generation;
- apply water during placement of waste in the active landfill face to minimize dust generation and promote compaction;
- landscape closed portions of the landfill area;
- apply soil cement to unused portions of the landfill area;
- maintain a 750-foot buffer zone along the southern property boundary;
- install a dust screen along the southern property boundary;

- maintain permanent landscaping around the site entrance, parking, and administrative areas, and along the west and south perimeters of the Project Site, per the site-specific *Landscaping Plan*;
- install and maintain a wheel wash to clean the tires of trucks leaving the site; and
- periodically sweep Lualualei Naval Road between the PVT entrance and the concrete channel with PVT's commercial street sweeper.

Hydrogen sulfide (H<sub>2</sub>S) is a flammable, colorless gas with a characteristic rotten-egg-like odor. Humans can detect hydrogen sulfide odors at very low levels in air [i.e. 8 ppb], generally below levels that would cause health effects (EPA 2014). Hydrogen sulfide may be formed in a landfill environment through the reduction of sulfate (SO<sub>4</sub><sup>2-</sup>) by sulfate-reducing bacteria. There are several contributing factors that may result in the production of hydrogen sulfide in C&D landfills (EPA 2014). Moisture control is recommended by the US EPA to prevent the formation of hydrogen sulfide. The Project Site is in an area of low rainfall. C&D debris is characteristically dry and has little or no active organic material. PVT implements best management practices to reduce moisture in the landfill as described in Section 2.5, *Description of the Proposed Action*. PVT has surveyed the existing landfill for landfill gases and has never detected hydrogen sulfide.

Odor is not an issue at PVT ISWMF due to the inert nature of the C&D debris accepted at the site. Per PVT's *Operations Plan*, noticeable odor is investigated to determine its source and to then be dealt with accordingly. Odorous loads are immediately identified at the scale-house and either rejected or immediately deposited and covered with non-odorous refuse or soil.

PVT requires drivers of non-household vehicles to cover their loads. PVT penalizes drivers that do not adhere to their rules and will suspend repeat offenders from the site, if necessary.

EIS Section 2.7, *Alternatives to the Proposed Action* includes an alternatives analysis in accordance with HAR 11-200-17(f). Section 2.7.1.3, *Alternative Locations* evaluates 11 sites previously identified by the City and County of Honolulu (CCH) as possible locations for waste management and disposal. A 2012 CCH siting study originally identified 465 potential landfill sites. After applying screening factors to the 465 potential sites, 11 sites remained that were compatible for use as a waste disposal and processing facility. The EIS team independently evaluated the 11 sites and also considered the following constraints:

- Ownership of property;
- Land was not vacant and could not be developed within the timeframe of the PVT ISWMF closure;
- Incompatibility with current and surrounding land uses (e.g. restricted agriculture, preservation land); and
- Engineering and site development constraints (e.g. within the tsunami evacuation zone, close proximity to wetlands).

The Project Site is the only land parcel that could attain the objectives of the Proposed Action.

Under the No Action Alternative, the CCH's Department of Environmental Services would be responsible for siting, permitting, managing, and operating a public facility. The CCH has multiple siting options not available to PVT, including the ability to condemn land and expand city and private roadways.

The two City and County landfill siting studies are attached to the Final EIS as Appendix L.

PVT encourages community members to call their office with complaints related to dust, odor, and traffic.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,

A handwritten signature in black ink that reads "Karl B. Bromwell". The signature is written in a cursive, flowing style.

**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

---

From: HENRY AGBAYANI [noreply@jotform.com]  
Sent: Friday, September 06, 2019 6:12 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - HENRY AGBAYANI

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name HENRY AGBAYANI  
Email [HENRY578@AOL.COM](mailto:HENRY578@AOL.COM)  
Phone Number (808) 6855935  
Address Street Address: 2501 NIHI ST  
City: HONOLULU  
State / Province: HI  
Postal / Zip Code: 96819

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

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From: Michelle Ah Sam [noreply@jotform.com]  
Sent: Saturday, August 31, 2019 8:50 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Michelle Ah Sam

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Michelle Ah Sam  
Email [michelle.ahsam@yahoo.com](mailto:michelle.ahsam@yahoo.com)  
Address Street Address: 87-155 Pualeilani St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)



The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

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I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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Are you Native Hawaiian?      No

---

From: Sunshine Aiona [noreply@jotform.com]

Sent: Friday, September 06, 2019 5:36 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Sunshine Aiona

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Sunshine Aiona

Email [sspaaluhi@aol.com](mailto:sspaaluhi@aol.com)

Address Street Address: 87-131 Pualeilani Street

City: Waianae

State / Province: Hawaii

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

The current PVT Landfill has been operating in Nānākuli and Mā‘ili at its current location since 1985. There is only a 750-foot “buffer zone” between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai‘i that abuts hundreds of residences and public places and so closely.

There are countless kama‘āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

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#### Justice for Native Hawaiians and Working Families

According to the State of Hawai‘i, “Environmental justice is the right of every person in Hawai‘i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai‘i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the ‘āina for present and future generations.” (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā‘ili.

Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

From: Lori Ashley [noreply@jotform.com]  
Sent: Friday, September 06, 2019 8:02 AM  
To: Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Lori Ashley

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Lori Ashley  
Email [waianae\\_77@yahoo.com](mailto:waianae_77@yahoo.com)  
Phone Number (714) 3764084  
Address Street Address: 84-740 Kili Dr  
Street Address Line 2: Apt 830  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Christine Auwae [noreply@jotform.com]  
Sent: Saturday, August 31, 2019 7:38 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Christine Auwae

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Christine Auwae  
Email [cauwae@yahoo.com](mailto:cauwae@yahoo.com)  
Phone Number (808) 2243024  
Address Street Address: 87-1240 Hakimo Rd  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
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Are you Native Hawaiian? No

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From: Jasmine Balictar [noreply@jotform.com]  
Sent: Friday, August 30, 2019 7:57 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Jasmine Balictar

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Jasmine Balictar  
Email [jasmine\\_balictar@yahoo.com](mailto:jasmine_balictar@yahoo.com)  
Phone Number (808) 6870354  
Address Street Address: 1053 Wiliki Dr  
City: Honolulu  
State / Province: Hawai'i  
Postal / Zip Code: 96818

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

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From: Jolyn Ballenti [noreply@jotform.com]  
Sent: Monday, September 02, 2019 6:41 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Jolyn Ballenti

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Jolyn Ballenti  
Email [jolynballenti@yahoo.com](mailto:jolynballenti@yahoo.com)  
Phone Number (808) 2309194  
Address Street Address: 89-630 Haleakala avenue  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes



**From:** Ryan Benavente [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 10:17 AM

**To:** Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ryan Benavente

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

**Name** Ryan Benavente

**Email** [ryan@hokua.net](mailto:ryan@hokua.net)

**Address** Street Address: 1288 Ala Moana. Blvd  
City: Honolulu  
State / Province: HI  
Postal / Zip Code: 96814

**Testimony** Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Kraintz, AICP:

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neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

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treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

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#### Restore Pono

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I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i

Department of Health, State of Hawai'i Land Use  
Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

From: Susan Bowyer [noreply@jotform.com]

Sent: Friday, September 06, 2019 7:16 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Susan Bowyer

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Susan Bowyer

Email [skbowyee@gmail.com](mailto:skbowyee@gmail.com)

Phone Number (808) 30669067

Address Street Address: 2101 Bedford Ave Street Address Line 2: Apt C10

City: Brooklyn

State / Province: New York

Postal / Zip Code: 11226

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes



**From:** Emma Broderick [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 10:59 AM

**To:** Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Emma Broderick

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	Emma Broderick
Email	<a href="mailto:keahibro@gmail.com">keahibro@gmail.com</a>
Address	Street Address: 1700 Makiki St Apt 214 City: Honolulu State / Province: Hawaii Postal / Zip Code: 96822
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Krantz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.</p> <p>I respectfully request that PVT be required to</p>

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#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on

the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

Are you Native  
Hawaiian?

Yes

---

From: Len Chai [noreply@jotform.com]

Sent: Tuesday, September 03, 2019 2:54 PM

To: Kraitz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Len Chai

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Len Chai

Email [jackson.hawaii@yahoo.com](mailto:jackson.hawaii@yahoo.com)

Phone Number (443) 2485154

Address Street Address: 1206 Massey st.

City: Killeen

State / Province: Tx

Postal / Zip Code: 76541

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Kraitz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

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Restore Pono

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I affirm that everyone in Hawai‘i should have a “clean and healthful environment” (Hawai‘i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā‘ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai‘i Department of Health, State of Hawai‘i Land Use Commission, Nānākuli-Mā‘ili Neighborhood Board

Are you Native Hawaiian?     Yes



From: Cheri Chai [noreply@jotform.com]  
Sent: Friday, September 06, 2019 7:10 AM  
To: Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Cheri Chai

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Cheri Chai  
Email [cherichai@yahoo.com](mailto:cherichai@yahoo.com)  
Phone Number (808) 6901891  
Address Street Address: 86-281 Hokupaa Street  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

The current PVT Landfill has been operating in Nānākuli and Mā‘ili at its current location since 1985. There is only a 750-foot “buffer zone” between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai‘i that abuts hundreds of residences and public places and so closely.

There are countless kama‘āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more ‘ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai‘i, “Environmental justice is the right of every person in Hawai‘i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai‘i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the ‘āina for present and future generations.” (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā‘ili.

Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

---

From: Liana Cortez-Kekawa [noreply@jotform.com]  
Sent: Friday, August 30, 2019 1:53 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Liana Cortez-Kekawa

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Liana Cortez-Kekawa  
Email [lmckekawa@yahoo.com](mailto:lmckekawa@yahoo.com)  
Phone Number (808) 4577303  
Address Street Address: 89-247 Pua Avenue  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

---

From: Michael Cuban [noreply@jotform.com]

Sent: Friday, September 06, 2019 11:15 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Michael Cuban

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Michael Cuban

Email [kokua@justice4hawaiians.com](mailto:kokua@justice4hawaiians.com)

Phone Number (808) 9794936

Address Street Address: 277 California Ave

City: Wahiawa

State / Province: Hi

Postal / Zip Code: 96786

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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Are you Native Hawaiian?     Yes

**From:** Roxanna Davis [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 1:10 PM

**To:** Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Roxanna Davis

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name Roxanna Davis

Email [kuauhau01@gmail.com](mailto:kuauhau01@gmail.com)

Phone Number (808) 271-1152

Address Street Address: 87-276 Mikana St  
City: Wai'anae  
State / Province: Hawai'i  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Kraintz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u

Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and

death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

Are you Native  
Hawaiian?

Yes

---

From: Kaulana Eli [noreply@jotform.com]  
Sent: Friday, September 06, 2019 9:44 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kaulana Eli

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kaulana Eli  
Email [kaulanae@inpeace.org](mailto:kaulanae@inpeace.org)  
Address Street Address: 851238 Kaneilio St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

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Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

**From:** Kapela Eli [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 12:22 PM

**To:** Kraitz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kapela Eli

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	Kapela Eli
Email	<a href="mailto:kapela.kaulana@gmail.com">kapela.kaulana@gmail.com</a>
Phone Number	(808) 2168666
Address	Street Address: 85-1238 Kaneilio St. City: Waianae State / Province: HI Postal / Zip Code: 96792
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Kraitz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli</p>

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According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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CC Office of Hawaiian Affairs, Mayor Kirk

Caldwell, Councilmember Kymberly Pine,  
Councilmember Ron Menor, Sen. Maile  
Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i  
Department of Health, State of Hawai'i Land Use  
Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

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From: Danielle Espiritu [noreply@jotform.com]

Sent: Friday, September 06, 2019 8:57 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Danielle Espiritu

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Danielle Espiritu

Email [dfk.espiritu@gmail.com](mailto:dfk.espiritu@gmail.com)

Phone Number (808) 3585011

Address Street Address: 91-1010 Muiona Street

City: Ewa Beach

State / Province: HI

Postal / Zip Code: 96706

Testimony Via E-mail

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Lena Esteban [noreply@jotform.com]  
Sent: Monday, September 02, 2019 6:23 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Lena Esteban

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Lena Esteban  
Email [Lesteban@hawaii.edu](mailto:Lesteban@hawaii.edu)  
Address Street Address: 89-1086 Pohakupalena St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

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There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

**From:** Peleke Flores [<mailto:noreply@jotform.com>]

**Sent:** Monday, September 09, 2019 10:52 AM

**To:** Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Peleke Flores

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	Peleke Flores
Email	<a href="mailto:hawaiian_feva@hotmail.com">hawaiian_feva@hotmail.com</a>
Address	Street Address: Po box 157 City: Waimea State / Province: Hi Postal / Zip Code: 96796
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Krintz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be</p>

right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health

## Crisis and Shared Their Testimony since the 1980's

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There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

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## Justice for Native Hawaiians and Working Families

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live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

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#### Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile



Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i  
Department of Health, State of Hawai'i Land Use  
Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

---

From: Raynae Fonoimoana [noreply@jotform.com]  
Sent: Friday, September 06, 2019 9:12 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Raynae Fonoimoana

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Raynae Fonoimoana  
Email [khcc532@gmail.com](mailto:khcc532@gmail.com)  
Phone Number (808) 218-4462  
Address Street Address: 54-010 Kukuna Road  
City: Hauula  
State / Province: HI  
Postal / Zip Code: 96717

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Carmen Guzman-Simpliciano [noreply@jotform.com]  
Sent: Friday, September 06, 2019 9:26 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Carmen Guzman-Simpliciano

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Carmen Guzman-Simpliciano  
Email [carmzz84@gmail.com](mailto:carmzz84@gmail.com)  
Phone Number (808) 2919231  
Address Street Address: 86-194 Leihoku Street  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Stop the Public Health Crisis

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

---

From: Ruben A Hanohano jr [noreply@jotform.com]  
Sent: Wednesday, September 04, 2019 1:30 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ruben A Hanohano jr

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Ruben A Hanohano jr  
Email [alahanohano@ymail.com](mailto:alahanohano@ymail.com)  
Address Street Address: 89320 Nanakuli Ave  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
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Are you Native Hawaiian?     Yes

**From:** Shirline Ho [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 2:36 PM

**To:** Kraitz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Shirline Ho

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	Shirline Ho
Email	<a href="mailto:shirline52@gmail.com">shirline52@gmail.com</a>
Phone Number	(808) 3751537
Address	Street Address: 85-824B Lihue St. City: Wai'anae State / Province: HI Postal / Zip Code: 96792
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Kraitz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli</p>

Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk

Caldwell, Councilmember Kymberly Pine,  
Councilmember Ron Menor, Sen. Maile  
Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i  
Department of Health, State of Hawai'i Land Use  
Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

---

From: Christine Hooker [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 12:50 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Christine Hooker

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Christine Hooker  
Email [kamailei.hooker@gmail.com](mailto:kamailei.hooker@gmail.com)  
Phone Number (808) 7770708  
Address Street Address: 86-281 Hokupaa Street  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Stop the Public Health Crisis

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miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

---

From: Junko Iaela [noreply@jotform.com]

Sent: Saturday, September 07, 2019 1:06 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Junko Iaela

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Junko Iaela

Email [iaelajunko@gmail.com](mailto:iaelajunko@gmail.com)

Phone Number (808) 7813501

Address Street Address: Puuhonua O Waianae

City: Waianae

State / Province: HI

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

---

From: Joy Inada [noreply@jotform.com]  
Sent: Friday, September 06, 2019 5:00 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Joy Inada

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Joy Inada  
Email [joyst1babe@msn.com](mailto:joyst1babe@msn.com)  
Phone Number (808) 2756439  
Address Street Address: 87-236 Kahau Street  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Are you Native Hawaiian?      Okinawan



---

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Sent: Friday, September 06, 2019 5:07 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
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Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Roger Inada

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Roger Inada  
Email [joyst1babe@msn.com](mailto:joyst1babe@msn.com)  
Phone Number (808) 3863428  
Address Street Address: 87-236 Kahau street  
City: Waianae  
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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

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From: Lucille Inada [noreply@jotform.com]

Sent: Saturday, September 07, 2019 3:02 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Lucille Inada

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Lucille Inada

Email [linada@yahoo.com](mailto:linada@yahoo.com)

Phone Number (661) 4358312

Address Street Address: 87-131 Auyoung Hmstd Rd

City: Nanakuli

State / Province: HI

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?      No

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From: Matthew Ing [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 1:14 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Matthew Ing

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Matthew Ing  
Email [ing.matt@gmail.com](mailto:ing.matt@gmail.com)  
Address Street Address: 2101 Nuuanu Ave  
Street Address Line 2: Apt. 1806  
City: Honolulu  
State / Province: HI  
Postal / Zip Code: 96817

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Restore Pono

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Are you Native Hawaiian?     Yes

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From: Chelsey Jay [noreply@jotform.com]  
Sent: Friday, September 06, 2019 9:51 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Chelsey Jay

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Chelsey Jay  
Email [maKanaleij@gmail.com](mailto:maKanaleij@gmail.com)  
Phone Number (808) 2204166  
Address Street Address: PO BOX 30931  
City: Honolulu  
State / Province: HI  
Postal / Zip Code: 96820

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

**From:** Jessica Jelf-Albert [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 11:22 AM

**To:** Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Jessica Jelf-Albert

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

**Name** Jessica Jelf-Albert

**Email** [jjelfalbert7@gmail.com](mailto:jjelfalbert7@gmail.com)

**Address** Street Address: 1723 18th Avenue #36  
City: Seattle  
State / Province: WA  
Postal / Zip Code: 98122

**Testimony** Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use Commission, Nānākuli-Mā'ili Neighborhood Board



Are you Native  
Hawaiian?

Yes

**From:** Joan Jensen [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 10:29 AM

**To:** Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Joan Jensen

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	Joan Jensen
Email	<a href="mailto:umiokalani@gmail.com">umiokalani@gmail.com</a>
Phone Number	(808) 4500550
Address	Street Address: 54-280 Kawaipuna Pl City: Hauula State / Province: HI Postal / Zip Code: 96717
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Kraintz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.</p>

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful

involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use

Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

---

From: Christine Kaakau [noreply@jotform.com]  
Sent: Friday, September 06, 2019 3:44 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Christine Kaakau

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Christine Kaakau  
Email [chriskaakau@gmail.com](mailto:chriskaakau@gmail.com)  
Phone Number (808) 3486980  
Address Street Address: 85-170C Ala Hema St  
City: Waianae  
State / Province: Hawai'i  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)



The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

**From:** April Kaawa [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 2:24 PM

**To:** Kraitz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - April Kaawa

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name	April Kaawa
Email	<a href="mailto:kapiolani_flores@yahoo.com">kapiolani_flores@yahoo.com</a>
Phone Number	(808) 3542360
Address	Street Address: 89-404 Haleakala ave City: Nānākuli State / Province: Hi Postal / Zip Code: 96792
Testimony	<p>Via E-mail</p> <p>Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007</p> <p>Aloha Mr. Franz Kraitz, AICP:</p> <p>I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.</p> <p>The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli</p>

Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

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#### Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk

Caldwell, Councilmember Kymberly Pine,  
Councilmember Ron Menor, Sen. Maile  
Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i  
Department of Health, State of Hawai'i Land Use  
Commission, Nānākuli-Mā'ili Neighborhood  
Board

Are you Native  
Hawaiian?

Yes

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From: Chanel Kaeo [noreply@jotform.com]  
Sent: Monday, September 02, 2019 8:12 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Chanel Kaeo

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Chanel Kaeo  
Email [baby\\_le\\_jolie@hotmail.com](mailto:baby_le_jolie@hotmail.com)  
Address Street Address: 87-119 Helelua Street  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

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From: Kanoeanuhea Kahalekai-Willing [noreply@jotform.com]

Sent: Friday, August 30, 2019 12:26 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kanoeanuhea Kahalekai-Willing

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kanoeanuhea Kahalekai-Willing

Email [kahalekai.willing.noe@gmail.com](mailto:kahalekai.willing.noe@gmail.com)

Address Street Address: 87-119 Helelua St. Apt. F301

City: Waianae

State / Province: HI

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

The current PVT Landfill has been operating in Nānākuli and Mā‘ili at its current location since 1985. There is only a 750-foot “buffer zone” between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai‘i that abuts hundreds of residences and public places and so closely.

There are countless kama‘āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more ‘ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai‘i, “Environmental justice is the right of every person in Hawai‘i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai‘i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the ‘āina for present and future generations.” (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā‘ili.

Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

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From: Kekuialono Kahele [noreply@jotform.com]  
Sent: Wednesday, September 11, 2019 10:55 AM  
To: Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; repeli@Capitol.hawaii.gov; senshimabukuro@capitol.hawaii.gov; dbedt.luc.web@hawaii.gov; webmail@doh.hawaii.gov; info@oha.org  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kekuialono Kahele

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kekuialono Kahele  
Email kui.kahele@gmail.com  
Phone Number (808) 3122885  
Address Street Address: 87-1771 Mohihi St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Kraintz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks,

and other public facilities and spaces.

## Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

## Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead

fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

Are you Native Hawaiian?      Yes

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From: Kyle Kajihiro [noreply@jotform.com]  
Sent: Thursday, September 05, 2019 10:42 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kyle Kajihiro

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kyle Kajihiro  
Email [kyle.kajihiro@gmail.com](mailto:kyle.kajihiro@gmail.com)  
Address Street Address: 657 Husten St, Apt. B  
City: Honolulu  
State / Province: HI  
Postal / Zip Code: 96826

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These



neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

#### Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

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From: Nancy Kapiko [noreply@jotform.com]  
Sent: Friday, August 30, 2019 12:33 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Nancy Kapiko

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Nancy Kapiko  
Email [neyshagirl@hotmail.com](mailto:neyshagirl@hotmail.com)  
Phone Number (808) 3811625  
Address Street Address: 2229 Tantalus Drive  
City: Honolulu  
State / Province: HI  
Postal / Zip Code: 96813

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Azure Kawelo [noreply@jotform.com]

Sent: Friday, September 06, 2019 10:43 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Azure Kawelo

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Azure Kawelo

Email [mkawelo@kawaihonapcs.org](mailto:mkawelo@kawaihonapcs.org)

Phone Number (808) 3307511

Address Street Address: 91-1020 'Ualakupu St

City: Kapolei

State / Province: Hawaii

Postal / Zip Code: 96707

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes



---

From: Chablos Kekua [noreply@jotform.com]  
Sent: Friday, September 06, 2019 9:01 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Chablos Kekua

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Chablos Kekua  
Email [chabliskekua@gmail.com](mailto:chabliskekua@gmail.com)  
Phone Number (808) 2000239  
Address Street Address: 89-1005 Pikaolena st.  
City: Waianae  
State / Province: Hi  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

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Are you Native Hawaiian?     Yes

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From: Brynner Kekua [noreply@jotform.com]

Sent: Friday, September 06, 2019 9:05 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Brynner Kekua

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Brynner Kekua

Email [brynnerkekua@gmail.com](mailto:brynnerkekua@gmail.com)

Phone Number (808) 2000239

Address Street Address: 88-1005 Pikaioleena st

City: Waianae

State / Province: HI

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

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#### Justice for Native Hawaiians and Working Families

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Mona Keliinoi [noreply@jotform.com]

Sent: Friday, August 30, 2019 9:30 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Mona Keliinoi

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Mona Keliinoi

Email [m.p.keliinoi@gmail.com](mailto:m.p.keliinoi@gmail.com)

Phone Number (+18082240690) +18082240690

Address Street Address: 87-860 Farrington Hwy. APT C

City: Waianae

State / Province: Hawaii

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

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According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Justin Keliipaakaua [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 1:09 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Justin Keliipaakaua

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Justin Keliipaakaua  
Email [jkkeliip@hawaii.edu](mailto:jkkeliip@hawaii.edu)  
Address Street Address: 91-1020 Mikohu st. apt. 21 C  
City: Ewa Beach  
State / Province: HI  
Postal / Zip Code: 96706

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
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Are you Native Hawaiian?     Yes

**From:** Rawlette Kraut [<mailto:noreply@jotform.com>]

**Sent:** Friday, September 06, 2019 12:02 PM

**To:** Kraintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

**Subject:** Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Rawlette Kraut

**'A'ole PVT - No more landfills in Nānākuli and Mā'ili**

Name Rawlette Kraut

Email [rpkraut@hotmail.com](mailto:rpkraut@hotmail.com)

Phone Number (808) 7827169

Address Street Address: 2117 ST. LOUIS DR.  
City: HONOLULU  
State / Province: HI  
Postal / Zip Code: 96816

Testimony Via E-mail

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Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

### Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and

death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā'ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā'ili.

#### Restore Pono

The kama'āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā'ili point towards a very clear public health crisis.

I affirm that everyone in Hawai'i should have a "clean and healthful environment" (Hawai'i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā'ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.



CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai'i Department of Health, State of Hawai'i Land Use Commission, Nānākuli-Mā'ili Neighborhood Board

Are you Native Hawaiian?

Yes

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From: Christine Laumauna [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 9:29 PM  
To: Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Christine Laumauna

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Christine Laumauna  
Email [kulaumau@yahoo.com](mailto:kulaumau@yahoo.com)  
Address Street Address: 89-620 Nanakuli Ave  
City: Wai'anae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Jasmine Laupola [noreply@jotform.com]

Sent: Friday, September 06, 2019 8:54 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Jasmine Laupola

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Jasmine Laupola

Email [jaslaupola@gmail.com](mailto:jaslaupola@gmail.com)

Phone Number (808) 3939245

Address Street Address: 84-648 B Kepue Street

City: Waianae

State / Province: HI

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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#### Justice for Native Hawaiians and Working Families

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Restore Pono

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Ikaika Lum [noreply@jotform.com]  
Sent: Monday, September 02, 2019 10:37 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ikaika Lum

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Ikaika Lum  
Email [kanakamaoli@gmail.com](mailto:kanakamaoli@gmail.com)  
Phone Number (808) 292-2881  
Address Street Address: 95-684 Maiaku St.  
City: Mililani  
State / Province: Hawaii  
Postal / Zip Code: 96789

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Restore Pono

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Are you Native Hawaiian?     Yes

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From: Jan Makepa [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 9:46 PM  
To: Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Jan Makepa

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Jan Makepa  
Email [jmakepa808@gmail.com](mailto:jmakepa808@gmail.com)  
Phone Number (808) 3497502  
Address Street Address: 85-1321 KAPAEKAHI ST  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krintz, AICP:

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#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and

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Restore Pono

The kama‘āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā‘ili point towards a very clear public health crisis.

I affirm that everyone in Hawai‘i should have a “clean and healthful environment” (Hawai‘i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā‘ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai‘i Department of Health, State of Hawai‘i Land Use Commission, Nānākuli-Mā‘ili Neighborhood Board

Are you Native Hawaiian?     Yes

---

From: Ja Makepa [noreply@jotform.com]  
Sent: Friday, September 06, 2019 8:50 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ja Makepa

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Ja Makepa  
Email [jmakepa808@gmail.com](mailto:jmakepa808@gmail.com)  
Phone Number (808) 3497502  
Address Street Address: 85-1321 KAPAEKAHI ST  
City: WAIANAE  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

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There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

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Are you Native Hawaiian?     Yes



---

From: Numela Makinano [noreply@jotform.com]  
Sent: Friday, August 30, 2019 8:43 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Numela Makinano

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Numela Makinano  
Email [numelamakinano@gmail.com](mailto:numelamakinano@gmail.com)  
Phone Number (808) 3914324  
Address Street Address: 89-1053 Pikaiole St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Restore Pono

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Are you Native Hawaiian?     Yes

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From: Monte McComber [noreply@jotform.com]  
Sent: Friday, September 06, 2019 8:35 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Monte McComber

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Monte McComber  
Email [momccomb@gmail.com](mailto:momccomb@gmail.com)  
Address Street Address: 89-456 Farrington Hwy.  
City: Nanakuli  
State / Province: HI  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Are you Native Hawaiian?     Yes

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From: Alexander McNicoll [noreply@jotform.com]  
Sent: Thursday, August 29, 2019 11:23 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Alexander McNicoll

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Alexander McNicoll  
Email [alikamc@gmail.com](mailto:alikamc@gmail.com)  
Address Street Address: 89-402 Mokiawe St  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

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Are you Native Hawaiian?     Yes

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From: David Morales [noreply@jotform.com]  
Sent: Monday, September 02, 2019 4:21 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - David Morales

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name David Morales  
Email [yumio1222@gmail.com](mailto:yumio1222@gmail.com)  
Phone Number (808) 6682121  
Address Street Address: 87-104 Kipaoa Pl  
City: Nanakuli  
State / Province: Hawai'i  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian? No

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From: Sean Nagamatsu [noreply@jotform.com]  
Sent: Friday, September 06, 2019 4:01 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Sean Nagamatsu

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Sean Nagamatsu  
Email [snagamat@gmail.com](mailto:snagamat@gmail.com)  
Address Street Address: PO Box 12187  
City: HONOLULU  
State / Province: Hawaii  
Postal / Zip Code: 96828

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According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Karen Nakasone [noreply@jotform.com]

Sent: Friday, September 06, 2019 4:14 PM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Karen Nakasone

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Karen Nakasone

Email [knakasonehsp@gmail.com](mailto:knakasonehsp@gmail.com)

Address Street Address: 45-557 C Kea'ahala Rd

City: Kāne'ohe

State / Province: HI

Postal / Zip Code: 96744

Testimony Via E-mail

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According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and



Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian? No

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From: Bobbie Nava [noreply@jotform.com]  
Sent: Monday, September 02, 2019 6:41 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Bobbie Nava

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Bobbie Nava  
Email [Bobbie.Nava@yahoo.com](mailto:Bobbie.Nava@yahoo.com)  
Phone Number (415) 6723094  
Address Street Address: 374 Imperial Way Street Address Line 2: Apt 6  
City: Daly City  
State / Province: CA  
Postal / Zip Code: 94015

Testimony Via E-mail

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From: Michael O'Connell [noreply@jotform.com]  
Sent: Monday, September 02, 2019 4:18 PM  
To: Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Michael O'Connell

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Michael O'Connell  
Email [michaelo@hawaii.rr.com](mailto:michaelo@hawaii.rr.com)  
Phone Number (808) 3489460  
Address Street Address: 87-104 Kipaoa Pl  
City: Nanakuli  
State / Province: Hawai'i  
Postal / Zip Code: 96792

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According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and

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Restore Pono

The kama‘āina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Mā‘ili point towards a very clear public health crisis.

I affirm that everyone in Hawai‘i should have a “clean and healthful environment” (Hawai‘i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā‘ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai‘i Department of Health, State of Hawai‘i Land Use Commission, Nānākuli-Mā‘ili Neighborhood Board

Are you Native Hawaiian?     Yes



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From: Hoaliku O'Connell [noreply@jotform.com]  
Sent: Monday, September 02, 2019 4:24 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Hoaliku O'Connell

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Hoaliku O'Connell  
Email [hoaliku@gmail.com](mailto:hoaliku@gmail.com)  
Phone Number (808) 3724764  
Address Street Address: 87-104 Kipaoa Pl  
City: Nanakuli  
State / Province: Hawai'i  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

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Are you Native Hawaiian?     Yes

---

From: Yumi O'Connell [noreply@jotform.com]  
Sent: Monday, September 02, 2019 4:13 PM  
To: Krantz, Franz; NB Testimony; Pine, Kimberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Yumi O'Connell

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Yumi O'Connell  
Email [yumio1222@gmail.com](mailto:yumio1222@gmail.com)  
Phone Number (808) 3755615  
Address Street Address: 87-104 Kipaoa Pl  
City: Waianae  
State / Province: Hawai'i  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?      Other my husband and child are Hwn

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From: Shane Paris [noreply@jotform.com]

Sent: Friday, August 30, 2019 8:00 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell; [repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov); [webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Shane Paris

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Shane Paris

Email [patriceparis@hawaii.rr.com](mailto:patriceparis@hawaii.rr.com)

Phone Number (808) 6839485

Address Street Address: 89-592 Mokiawe St

City: Waianae

State / Province: Hawaii

Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still Remain in Nānākuli - TMK: (1) 8-7-009:007

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Joanna Pokipala [noreply@jotform.com]  
Sent: Friday, September 06, 2019 6:15 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Joanna Pokipala

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Joanna Pokipala  
Email [ygetemail@yahoo.com](mailto:ygetemail@yahoo.com)  
Phone Number (808) 2271298  
Address Street Address: 265 S. Vineyard st. C201  
City: Honolulu  
State / Province: Hawai'i  
Postal / Zip Code: 96813

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Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
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Are you Native Hawaiian?     Yes

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From: Kauai Pratt-Aquino [noreply@jotform.com]  
Sent: Friday, September 06, 2019 7:02 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kauai Pratt-Aquino

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kauai Pratt-Aquino  
Email [kauai@prattlawhi.com](mailto:kauai@prattlawhi.com)  
Phone Number (808) 3931948  
Address Street Address: 45735 Wainana St.  
City: Kaneohe  
State / Province: HI  
Postal / Zip Code: 96744

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

---

From: Lovenna (Hanohano) Robinson [noreply@jotform.com]  
Sent: Thursday, September 05, 2019 12:08 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Lovenna (Hanohano) Robinson

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Lovenna (Hanohano) Robinson  
Email [lovennarobinson@gmail.com](mailto:lovennarobinson@gmail.com)  
Phone Number (575) 4425161  
Address Street Address: 5862 Jaguar Run  
City: Patrick AFB  
State / Province: FL  
Postal / Zip Code: 32925

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Are you Native Hawaiian?     Yes

---

From: Walter Rodenhust [noreply@jotform.com]  
Sent: Wednesday, September 04, 2019 7:44 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Walter Rodenhust

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Walter Rodenhust  
Email [kealiimaikai885@gmail.com](mailto:kealiimaikai885@gmail.com)  
Phone Number (808) 4455952  
Address Street Address: 2072 Alewa Drive  
City: Honolulu  
State / Province: Hawaii  
Postal / Zip Code: 96817

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

---

From: Kuhi Rowland [noreply@jotform.com]

Sent: Friday, September 06, 2019 8:53 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kuhi Rowland

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kuhi Rowland

Email [kokua@justice4hawaiians.com](mailto:kokua@justice4hawaiians.com)

Phone Number (808) 9794937

Address Street Address: 94-376 Hokuili St.

City: Mililani

State / Province: HI

Postal / Zip Code: 96789

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Are you Native Hawaiian?     Yes



---

From: Ileana Haunani Ruelas [noreply@jotform.com]  
Sent: Monday, September 02, 2019 6:04 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ileana Haunani Ruelas

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Ileana Haunani Ruelas  
Email [ileanahaunani@gmail.com](mailto:ileanahaunani@gmail.com)  
Phone Number (808) 3428490  
Address Street Address: 87-137 Keliikipi St  
City: Waianae  
State / Province: HI  
Postal / Zip Code: 96792

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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai'i, "Environmental justice is the right of every person in Hawai'i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai'i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the 'āina for present and future generations." (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: William Sabagala [noreply@jotform.com]  
Sent: Thursday, September 05, 2019 11:09 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - William Sabagala

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name William Sabagala  
Email [Kaleo101@hotmail.com](mailto:Kaleo101@hotmail.com)  
Phone Number (808) 3831299  
Address Street Address: 87-1665 Mokila Street  
City: Waianae  
State / Province: Hi  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Ernestine Sabagala [noreply@jotform.com]  
Sent: Saturday, August 31, 2019 3:20 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Ernestine Sabagala

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Ernestine Sabagala  
Email [erniesabagala@gmail.com](mailto:erniesabagala@gmail.com)  
Address Street Address: 87 1665 Mokila Street  
City: Waianae  
State / Province: Hi  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Are you Native Hawaiian?     Yes

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From: Deborah Salis [noreply@jotform.com]  
Sent: Friday, September 06, 2019 5:37 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Deborah Salis

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Deborah Salis  
Email [deborah.salis@yahoo.com](mailto:deborah.salis@yahoo.com)  
Phone Number (808) 2711660  
Address Street Address: 87-104 Kukakumu Place  
City: Waianae  
State / Province: Hi  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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Are you Native Hawaiian?     Yes

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From: Mark Siket [noreply@jotform.com]  
Sent: Friday, August 30, 2019 7:47 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Mark Siket

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Mark Siket  
Email [mark.r.siket@hotmail.com](mailto:mark.r.siket@hotmail.com)  
Phone Number (602) 6927178  
Address Street Address: 89-592 Mokiawe St  
City: Waianae  
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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

---

From: George Siket [noreply@jotform.com]  
Sent: Friday, August 30, 2019 9:32 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - George Siket

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name George Siket  
Email [patriceparis@hawaii.rr.com](mailto:patriceparis@hawaii.rr.com)  
Phone Number (808) 3302131  
Address Street Address: 89-592 Mokiawe Street  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2



miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

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There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

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Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

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Are you Native Hawaiian?     Yes

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From: Keren Siket [noreply@jotform.com]  
Sent: Friday, August 30, 2019 6:58 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Keren Siket

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Keren Siket  
Email [patriceparis@hawaii.rr.com](mailto:patriceparis@hawaii.rr.com)  
Phone Number (808) 3302131  
Address Street Address: 89-592 Mokiawe St  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

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Are you Native Hawaiian?     Yes

---

From: Joseph Simpliciano [noreply@jotform.com]  
Sent: Saturday, August 31, 2019 7:00 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Joseph Simpliciano

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Joseph Simpliciano  
Email [jks0609@gmail.com](mailto:jks0609@gmail.com)  
Phone Number (808) 2915527  
Address Street Address: 86-194 leihoku street  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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Are you Native Hawaiian?     Yes



---

From: JAYSLIN SMITH [noreply@jotform.com]  
Sent: Friday, August 30, 2019 9:36 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - JAYSLIN SMITH

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name JAYSLIN SMITH  
Email [alohakoukino@gmail.com](mailto:alohakoukino@gmail.com)  
Address Street Address: 89-130 Haleakala Ave  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

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Are you Native Hawaiian?     Yes

---

From: Brandon Tacadena [noreply@jotform.com]

Sent: Saturday, September 07, 2019 10:47 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Brandon Tacadena

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Brandon Tacadena

Email [bjt2467@gmail.com](mailto:bjt2467@gmail.com)

Phone Number (808) 3947076

Address Street Address: 87-385 Kulaapuni St.

City: Waianae

State / Province: HI

Postal / Zip Code: 96792

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neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

The current PVT Landfill has been operating in Nānākuli and Mā‘ili at its current location since 1985. There is only a 750-foot “buffer zone” between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai‘i that abuts hundreds of residences and public places and so closely.

There are countless kama‘āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more ‘ōpala in the community.

#### Justice for Native Hawaiians and Working Families

According to the State of Hawai‘i, “Environmental justice is the right of every person in Hawai‘i to live in a clean and healthy environment, to be treated fairly, and to have meaningful involvement in decisions that affect their environment and health; with an emphasis on the responsibility of every person in Hawai‘i to uphold traditional and customary Native Hawaiian practices that preserve, protect, and restore the ‘āina for present and future generations.” (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Māʻili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

I affirm that everyone in Hawaiʻi should have a “clean and healthful environment” (Hawaiʻi State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Māʻili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

Let us seek pono by taking steps toward environmental and health justice for our communities. Mahalo.

CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

Are you Native Hawaiian?      No

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From: Laurie Takeno [noreply@jotform.com]

Sent: Saturday, September 07, 2019 12:42 AM

To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)

Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Laurie Takeno

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Laurie Takeno

Email [laurieannndunn@gmail.com](mailto:laurieannndunn@gmail.com)

Address Street Address: 2310 Jennie St

City: Honolulu

State / Province: HI

Postal / Zip Code: 96819

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and

Mōhihi Street, and Pu‘u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

Public health studies on landfills associate living close to them (1 to 4 miles) with adverse pregnancy outcomes, increases in infant low birth weights, increases in the risk of birth defects, self-reported headaches, sleepiness, respiratory and central nervous system problems, psychological conditions, and gastrointestinal issues.

Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama‘āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980’s

The current PVT Landfill has been operating in Nānākuli and Mā‘ili at its current location since 1985. There is only a 750-foot “buffer zone” between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai‘i that abuts hundreds of residences and public places and so closely.

There are countless kama‘āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

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#### Justice for Native Hawaiians and Working Families

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The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā‘ili.



Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Māʻili.

Restore Pono

The kamaʻāina testimony, along with the scientific studies on the negative health effects of landfills, and the 10 year lower life expectancy for those in Nānākuli and Māʻili point towards a very clear public health crisis.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board  
Are you Native Hawaiian?     Yes

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From: Samantha Tanuvasa [noreply@jotform.com]  
Sent: Monday, September 02, 2019 8:33 AM  
To: Krintz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Samantha Tanuvasa

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Samantha Tanuvasa  
Email [jusamee@yahoo.com](mailto:jusamee@yahoo.com)  
Phone Number (808) 7210093  
Address Street Address: 91-1579 Loiloi Loop  
City: Ewa Beach  
State / Province: HI  
Postal / Zip Code: 96706

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krintz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

#### Adverse Health Effects of Landfills

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Public health studies on construction & demolition landfills clarify the specific risk of gypsum drywall which produces hydrogen sulfide (H<sub>2</sub>S) gas when it decomposes. The studies indicate that exposure to H<sub>2</sub>S within 3.1 miles of a landfill is associated with lung cancer deaths as well as with respiratory illness, disease, and death.

Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

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restore the ‘āina for present and future generations.” (Hawaii Environmental Justice Initiative Report 2008)

The operation of the current PVT Landfill and the proposed PVT Landfill is racist towards Native Hawaiians, a population which represents more than 70% of those that live in Nānākuli and Mā‘ili. Further, the PVT Landfills are prejudiced against the low to medium income working families that make up a majority of those who live in Nānākuli and Mā‘ili.

Restore Pono

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I affirm that everyone in Hawai‘i should have a “clean and healthful environment” (Hawai‘i State Const. Article XI, Sec. 9). Stop the public health crisis in Nānākuli and Mā‘ili and stop the proposed relocation of the PVT Landfill to another location in Nānākuli.

I, again, respectfully request that PVT be required to relocate its landfill to an isolated area.

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawai‘i Department of Health, State of Hawai‘i Land Use Commission, Nānākuli-Mā‘ili Neighborhood Board

Are you Native Hawaiian?     Yes

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From: Bridget Tynanes [noreply@jotform.com]  
Sent: Saturday, August 31, 2019 9:43 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Bridget Tynanes

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Bridget Tynanes  
Email [btynanes@hotmail.com](mailto:btynanes@hotmail.com)  
Phone Number (808) 6728234  
Address Street Address: 92-1216 Hulukoa Pl.  
City: Kapolei  
State / Province: HI  
Postal / Zip Code: 96707

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

I oppose the Draft Environmental Impact Statement (DEIS) application by PVT Land Company, Ltd. (PVT) that proposes to relocate its landfill to another location in Nānākuli.

The current PVT Landfill sits right along the houses of the Auyoung Homestead Road and Mōhihi Street neighborhood and also runs along Ulehawa stream and Lualualei Naval Road. The DEIS only plans for the PVT Landfill to relocate across Lualualei Naval Road to a 179-acre parcel at the base of Pu'u Heleakalā that is agriculturally zoned and borders the Pu'u Heleakalā neighborhood and the Nānākuli Homestead. This relocation is still in the heart of the Nānākuli and Mā'ili communities and will be right along the houses of Pu'u Heleakalā neighborhood.

I respectfully request that PVT be required to relocate its landfill to an isolated area with a minimum distance of at least 2 miles from homes, schools, health facilities, grocery stores, parks, and other public facilities and spaces.

Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2

miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

The current PVT Landfill has been operating in Nānākuli and Mā'ili at its current location since 1985. There is only a 750-foot "buffer zone" between the landfill and the residences, places of worship, farms, and Ulehawa stream. Everyday, for over three decades, thousands of people visit the five schools, kūpuna housing, grocery stores, medical clinics, restaurants, parks, and hundreds of residences all within two miles of the current and proposed PVT Landfills. There exists no other such landfill in Hawai'i that abuts hundreds of residences and public places and so closely.

There are countless kama'āina testimony since the 1980's sharing stories of sickness and death in relation to landfills in general and the PVT Landfill in specific. Stories of contaminated dust that comes from the PVT Landfill that coats homes, cars, and yards. Stories of foul smells and odors that come from the PVT Landfill. Stories of contaminated debris and waste that flies off of trucks as they make their way to the PVT Landfill to dump. Stories of waste and debris flowing into the neighborhood and into Ulehawa stream after heavy rains, followed by sightings of dead fish. Stories of mothers dying young, keiki and kūpuna with respiratory problems, and deaths due to cancer and respiratory complications.

Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

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Restore Pono

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Are you Native Hawaiian? No

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From: Cade Watanabe [noreply@jotform.com]  
Sent: Friday, August 30, 2019 8:42 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Cade Watanabe

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Cade Watanabe  
Email [cadewatanabe@gmail.com](mailto:cadewatanabe@gmail.com)  
Address Street Address: 1717 Poki Street, Apt. A  
City: Honolulu  
State / Province: HI Hawaii  
Postal / Zip Code: 96822

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

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CC Office of Hawaiian Affairs, Mayor Kirk Caldwell, Councilmember Kymberly Pine, Councilmember Ron Menor, Sen. Maile Shimabukuro, Rep. Stacelyn Eli, State of Hawaiʻi Department of Health, State of Hawaiʻi Land Use Commission, Nānākuli-Māʻili Neighborhood Board

---

From: Kamuela Werner [noreply@jotform.com]  
Sent: Friday, August 30, 2019 9:44 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Kamuela Werner

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Kamuela Werner  
Email [kamuelaw@gmail.com](mailto:kamuelaw@gmail.com)  
Address Street Address: 87-228 E St. Johns Road  
City: Waianae  
State / Province: Hawaii  
Postal / Zip Code: 96792

Testimony Via E-mail

Re: Opposition to the Relocation of the PVT Integrated Solid Waste Management Facility (ISWMF) to Still  
Remain in Nānākuli - TMK: (1) 8-7-009:007

Aloha Mr. Franz Krantz, AICP:

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Stop the Public Health Crisis

According to the National Center for Health Statistics in the U.S. Small-Area Life Expectancy Estimates Project, the life expectancies for those who live in the neighborhoods that are approximately less than 2 miles from the current PVT Landfill are the 2nd and 3rd lowest in the State of Hawai'i. These

neighborhoods include Nānākuli and Princess Kahanu Homesteads, Auyoung Homestead Road and Mōhihi Street, and Pu'u Heleakalā. These neighborhoods have a life expectancy that is 10 years shorter than the State average of 82 years.

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Kama'āina have Experienced this Public Health Crisis and Shared Their Testimony since the 1980's

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Today, over 18,000 people live, work, and play within 2-miles of the current and proposed PVT Landfills. If the proposed landfill relocation is allowed, these stories will continue, and will only get worse because now you will have even more 'ōpala in the community.

#### Justice for Native Hawaiians and Working Families

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Are you Native Hawaiian?     Yes

---

From: Nora Wilson [noreply@jotform.com]  
Sent: Friday, August 30, 2019 4:55 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Nora Wilson

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Nora Wilson  
Email [ioanaelliott@yahoo.com](mailto:ioanaelliott@yahoo.com)  
Phone Number (702) 5747378  
Address Street Address: 87-1673 Mohihi st  
City: Nanakuli  
State / Province: Hi  
Postal / Zip Code: 96792

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Are you Native Hawaiian?      Others



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From: Hinaleimoana Wong-Kalu [noreply@jotform.com]  
Sent: Friday, September 06, 2019 1:52 AM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Hinaleimoana Wong-Kalu

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Hinaleimoana Wong-Kalu  
Email [taahine.hina@gmail.com](mailto:taahine.hina@gmail.com)  
Phone Number (808) 2254123  
Address Street Address: 523 Ekekela Place  
City: Honolulu  
State / Province: Hawaii  
Postal / Zip Code: 96817

Testimony Via E-mail

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Are you Native Hawaiian?     Yes

---

From: Hoolehua Wright [noreply@jotform.com]  
Sent: Tuesday, September 03, 2019 4:50 PM  
To: Krantz, Franz; NB Testimony; Pine, Kymberly Marcos; Menor, Ron; Mayor Kirk Caldwell;  
[repeli@Capitol.hawaii.gov](mailto:repeli@Capitol.hawaii.gov); [senshimabukuro@capitol.hawaii.gov](mailto:senshimabukuro@capitol.hawaii.gov); [dbedt.luc.web@hawaii.gov](mailto:dbedt.luc.web@hawaii.gov);  
[webmail@doh.hawaii.gov](mailto:webmail@doh.hawaii.gov); [info@oha.org](mailto:info@oha.org)  
Subject: Re: 'A'ole PVT - No more landfills in Nānākuli and Mā'ili - Hoolehua Wright

'A'ole PVT - No more landfills in Nānākuli and Mā'ili

Name Hoolehua Wright  
Email [hoolehua@msn.com](mailto:hoolehua@msn.com)  
Phone Number (808) 2026288  
Address Street Address: 89-325 Mano Ave  
City: Waianae  
State / Province: Hi  
Postal / Zip Code: 96792

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Are you Native Hawaiian?     Yes

***Draft EIS Comment Letters and Responses – Community Members – PVT Support  
Form Letter***

Aaliyah I.  
Aizayah Beatista  
James Joseph  
Layden Made  
Aariyah-Cheerie Doane  
Kili Kekaula  
Yvonne Mathewson  
Lauren Dolviar  
Leolani Mathewson  
Roance Lapan  
Andre Ramirez  
Darrell Holbin  
Charleston Silva  
Shannon Reriz  
Dyland Walain  
Reggie Williams  
Rhonda Williams  
Kyle Valdez  
Jeremiah Talbat  
Julius Dinony  
Stanley Bowen  
Pua M.C. Doane  
Leslie Balies  
Geri Lee Sofa  
Alea Ramirez  
Keoni Meyers  
Bronson Thompson  
Rusty Keaulana

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January 10, 2020

PVT Support Community  
c/o Kazu Uremura  
87-2020 Farrington Highway  
Waianae, Hawaii 96792

RE: PVT Integrated Solid Waste Management Facility (ISWMF) Relocation  
Draft Environmental Impact Statement (EIS)

Aloha:

Thank you for your comments on the PVT ISWMF Relocation Draft EIS.

We acknowledge that you support the PVT ISWMF Relocation project and PVT's ongoing contribution to the Waianae Coast community.

We appreciate your participation in this review process. Your letter and this response will be included in the Final EIS.

Should you have any questions or would like additional information, please contact me at (808) 587-7747 or via email at [karl.bromwell@hartcrowser.com](mailto:karl.bromwell@hartcrowser.com).

Sincerely,



**Karl Bromwell, MPH, REM, CEA, REPA**  
Principal Environmental Scientist  
Hart Crowser, Inc.

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : In Support of PVT ISWMF Relocation Plan

Dear Mr. Kraintz:

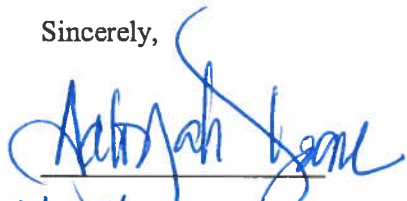
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Sincerely,

  
40 Kahu Uemura  
87-2020 Farr. Hwy  
Wai'anae, HI  
96795

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

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40 Kahu Uemua

87-2020 Farrington Hwy  
Wai'anae, HI

96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

  
James Joseph  
40 Kahu Uemuna  
87-2020 Farrington Hwy  
Waiānae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Krintz, AICP / (808) 768-8046  
[fkrintz@honolulu.gov](mailto:fkrintz@honolulu.gov)

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Sincerely,

Layden Mace  
Layden Mace  
c/o Kaze Muma  
87-2050 Farrington Hwy  
Wai'anae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

Aariyah-Cheene Doane  
C/o Kagu Uemura  
87-2920 Farrington Hwy  
Wai'anae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

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Sincerely,

Kili Kekaula  
Kili Kekaula

C/o Kagu Uumura  
87-2620 Farrington Hwy  
Wai'anae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,



Yvonne Mathewson

40 Kapiolani Hwy

87-2020 Farrington Hwy  
Wai'anae, HI 96795



September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
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Sincerely,

  
Lauren Dolvia

40 Kaze Kiemua  
87-2020 Farrington Hwy  
Waiānāe, HI  
96795

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

Leolani Mathewson

Leolani Mathewson

40 Kaze Uemura

87-2030 Farrington Hwy  
Wai'anae, HI

96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
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David S. Hopson

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
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Sincerely,

  
Andre Ramirez

40 87-2030 Farrington Hwy  
Waiānae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Krintz, AICP / (808) 768-8046  
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September , 2019

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Sincerely,

*Charleston Silva*

*40 Kazy Wemuna*

*87-2020 Farrington Hwy  
Wai'anae, HI 96792*

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
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Sincerely,

Shannon Remy  
40 Kahu Wernuna  
87-2030 Farrington Hwy  
Wai'anae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
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G. Kaze Uemura  
87-2020 Farrington  
Wai'anae, HI  
96792



September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

  
C/O Kazu Uemura  
87-2020 Farr. Hwy  
Wai'anae, HI 96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

*Rhonda Williams*  
Rhonda Williams  
40 Kaze Uemura  
87-2020 Farr. Hwy  
Wai'anae, HI  
96742

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

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Sincerely,

  
C/o Kago Kuremura  
87-2030 Farr, Hwy  
Waiānae, Hi  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
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Sincerely,

  
Jeremiah Talbot

40 Kahu Uremuna  
87-2020 Farrington Hwy  
Waiānae, HI 96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

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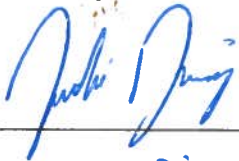
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PVT provides such a huge economic benefit to our community the Wai'anae Coast cannot afford to see them cease operations when they run out of space at their current location. We hope their EIS will be approved and they can continue to on their adjacent property.

Sincerely,



Julius Dinomy

40 Kahu Uemura

87-3050 Farrington Hwy

Wai'anae, HI

96795

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : In Support of PVT ISWMF Relocation Plan

Dear Mr. Kraintz:

I am writing to voice my support for the Draft Environmental Impact Statement (DEIS) submitted by PVT Land Company (PVT). I support PVT because they are one of the few organizations providing much-needed financial assistance to local students trying to attend college, as well as creating jobs for residents on the Wai'anae Coast.

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Sincerely,



Stanley Bowen

40 Kaze Uemura

87-2030 Farrington Hwy  
Wai'anae, HI

96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
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Sincerely,

  
Pua M.C. Doane

C/o Kazy Uemura  
87-3020 Farrington Hwy  
Wai'anae, HI  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

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Sincerely,

  
(Leslie Baller)  
40 Kaze Uemura  
87-2020 Farrington Hwy  
Wai'anae, Hi  
96792



September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : In Support of PVT ISWMF Relocation Plan

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PVT provides such a huge economic benefit to our community the Wai'anāe Coast cannot afford to see them cease operations when they run out of space at their current location. We hope their EIS will be approved and they can continue to on their adjacent property.

Sincerely,

  
Geni Lee Sofa  
C/o Kaze Uemura  
87-2020 Farrington Hwy  
Wāianae, Hi  
96792

September , 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : In Support of PVT ISWMF Relocation Plan

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I am writing to voice my support for the Draft Environmental Impact Statement (DEIS) submitted by PVT Land Company (PVT). I support PVT because they are one of the few organizations providing much-needed financial assistance to local students trying to attend college, as well as creating jobs for residents on the Wai'anae Coast.

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PVT provides such a huge economic benefit to our community the Wai'anae Coast cannot afford to see them cease operations when they run out of space at their current location. We hope their EIS will be approved and they can continue to on their adjacent property.

Sincerely,

Alea Ramirez

Alea Ramirez

C/o Kagu Uemura

87-2020 Farrington Hwy

Wai'anae, HI

96792

August 30, 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject: In Support of PVT ISWMF Relocation Plans

Dear Mr. Kraintz,

On behalf of the Nanakuli Community, I want to express my support for PVT's relocation plans to their property across the street.

We as a community must support PVT's commitment to recycling and high standards for construction and demolition (C&D) material disposal. By employing both recycling and waste to energy methods, more than 80% of the construction debris is being diverted from standard landfill practices. PVT's recycling program includes the separation and processing of C&D waste to generate feedstock as an alternative renewable fuel source.

PVT is one of the largest employers on the westside. Many friends and neighbors are employed by PVT which decreases drive times into town and allows for improved time with family.

I encourage you and the members of the Nanakuli Neighborhood Board to vote in favor of the relocation of PVT ISWMF to their Phase III portion of their property.

Sincerely,



Keoni Meyers

August 30, 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : In Support of PVT ISWMF Relocation Plan

Dear Mr. Kraintz:

I am writing to voice my support for the Draft Environmental Impact Statement (DEIS) submitted by PVT Land Company (PVT). I support PVT because they are one of the few organizations providing much-needed financial assistance to local students trying to attend college, as well as creating jobs for residents on the Wai'anāe Coast.

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PVT provides such a huge economic benefit to our community the Wai'anāe Coast cannot afford to see them cease operations when they run out of space at their current location. We hope their EIS will be approved and they can continue to on their adjacent property.

Sincerely,

  
Bronson Thompson

August 30, 2019

Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Franz Kraintz, AICP / (808) 768-8046  
[fkraintz@honolulu.gov](mailto:fkraintz@honolulu.gov)

Subject : IN SUPPORT OF THE PVT ISWMF RELOCATION PLANS

Dear Mr. Kraintz:

As a resident of Makaha and a strong advocate for improving and maintaining the spirit of the Westside, I am in full support of the relocation project to PVT's property across the street from their current operations. PVT has supported many of the Makaha Beach sand projects and special events over the years. Their kokua is genuine and sincere.

Therefore, I am writing to voice my support for the Draft Environmental Impact Statement (DEIS) submitted by PVT Land Company (PVT). I support PVT because they are one of the few organizations providing much-needed financial assistance to local community events, as well as creating jobs for residents on the Wai'anae Coast.

Since 2005, PVT has awarded almost \$1 million in scholarships to nearly 300 students from the Wai'anae Coast. This year alone, ten graduates from Wai'anae and Nānākuli high schools became PVT recipients as well as one from Kamaile Charter School in Waianae.

PVT is also one of the largest employers on the Wai'anae Coast, with 67 full-time employees and another 20 part-time employees. The vast majority of their employees also reside in West O'ahu, providing good-paying jobs to local people near their own neighborhood. And more than 25 percent of their full-time employees are women.

PVT provides such a huge economic benefit to our community the Wai'anae Coast cannot afford to see them cease operations when they run out of space at their current location. We hope their EIS will be approved and they can continue to on their adjacent property.

Mahalo,

A handwritten signature in black ink, appearing to read 'Rusty Keaulana', written in a cursive style.

Rusty Keaulana

Page intentionally left blank.

## 11 REFERENCES

The following revisions were made to Section 11 in the Final EIS in response to the Draft EIS comments.

Page	Revisions
11-2	<u><i>Brownlie &amp; Lee. (2019). PVT ISWMF Relocation Landscaping Plan. Honolulu, HI: Prepared for PVT Land Company Ltd.</i></u>
11-4	<u><i>DHHL. (2009). The Regional Plan for the Traditional Native Trust Lands of the Ahupua'a of Nanakuli. Retrieved from <a href="https://dhhl.hawaii.gov/wp-content/uploads/2011/06/Nanakuli-Regional-Plan.pdf">https://dhhl.hawaii.gov/wp-content/uploads/2011/06/Nanakuli-Regional-Plan.pdf</a></i></u>
11-6	<u><i>Hann et. al. (2018) Investigating options for reducing releases in the aquatic environment of microplastics emitted by (but not intentionally added in) products. Retrieved December 3, 2019, from <a href="https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_final_report_v5_full.pdf">https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_final_report_v5_full.pdf</a></i></u>
11-7	<u><i>Jacobs. (2019). DRAFT 2019 Integrated Solid Waste Management Plan Update. Honolulu, HI: Prepared for City and County of Honolulu.</i></u>
11-8	<u><i>Mathew A. (2019). W2E response to noise data request. Personal communication: email. November 15, 2019.</i></u>
11-9	<u><i>Patrick, I. (2019). DL Adams response to nighttime noise impacts request. Personal communication: email. December 4, 2019.</i></u>
11-9	<u><i>Pritchard, G. (2019). CMAD Consulting response to noise data request. Personal communication: email. November 25, 2019.</i></u>
11-9	<u><i>R.W. Beck. (2008). Integrated Solid Waste Management Plan Update. Retrieved February 2019, from <a href="http://www.opala.org/solid_waste/pdfs/2008_ISWMP.pdf">http://www.opala.org/solid_waste/pdfs/2008_ISWMP.pdf</a>.</i></u>
11-10	<u><i>US EPA. (2014). Best Management Practices to Prevent and Control Hydrogen Sulfide and Reduced Sulfur Compound Emissions at Landfills That Dispose of Gypsum Drywall. Retrieved from <a href="https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NG53.PDF?Dockey=P100NG53.PDF">https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NG53.PDF?Dockey=P100NG53.PDF</a>.</i></u>

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